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ABSTRACT This study of the images of occupations is based on the assumption that the world of work is of primary importance to young people choosing a career. Data were collected by use of the occupations questionnaire which was designed so that a respondent was asked to rate each of 15 occupations, on 34 two-ended, seven-point rating scales. The target population was students involved directly in college education, and the verbal system is that associated with the titles of major high-level professions and occupations. The marked agreement between all groups of subjects indicates that all college and university students in the United States share in one main system of beliefs about the higher level occupational world, and that the images are formed in early pre-high school years. Detailed analyses and charts support the many specific hypotheses and explorations.

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DEVELOPMENT AND CONSISTENCY OF STUDENT IMAGES OF OCCUPATIONS

June 1967

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

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Donald D. O'Dowd and David C. Beardslee

June 1967

The research reported herein was performed pursuant to a contract with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

Oakland University

Rochester, Michigan

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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A research project of any magnitude that spans a decade can be initiated, expanded and sustained only with the assistance of many interested and helpful colleagues. This observation is particularly applicable to a study dependent upon questionnaire data from a number of populations. The Occupations Project, a segment of which is described in this report, was initiated in 1958 and is not yet completed. The first main phase of the project was executed at Wesleyan University and provided a body of data that was essential to the unfolding of the second major phase of the research. The Cooperative Research Program provided support that was vital to the early development of the study. Invaluable research assistance was supplied by talented and interested undergraduate psychology majors at Wesleyan. Faculty colleagues at four eastern colleges and universities advanced the project goal of obtaining high-quality samples of student populations. The Connecticut General Insurance Company donated business machine and computer time to the project. In spite of all this assistance, the first phase of the research enterprise owed its success to the devoted service of Mrs. Beatrice M. Burford, who coordinated every aspect of that research program.

The second phase of the study was more extensive than the first and consequently was dependent upon the services of a wide range of willing people and agencies. We appreciate the cooperation and unfailing support of the Oakland University Computing and Data Processing Center staff, which accommodated for five years to the heavy demands of the Occupations Project for working space and machine time. The students, faculty, and administrative officers of ten colleges and universities and six high schools have earned our gratitude by their generosity in responding to our requests for cooperation. In particular, we wish to acknowledge our appreciation for the extensive support to our efforts given by the following friends and colleagues: Miss Janet Barnes, Dr. David E. Berlew, Dr. Robert Dixon, Mrs. Betty J. Griffin, Dr. E. Wayne Harbinger, Mr. Carl Mabee, Dr. Eldon Nonnamaker, Miss Shelagh O'Rourke, and Dr. Robert Stevens. We are especially indebted to Mrs. Jean Dion, who guided much of the data through elaborate analytical routines with maximum speed and accuracy. We wish to express our deep gratitude to Mrs. Ann Diemer, whose remarkable devotion to the organization of our far-flung research activities provided the essential personal and professional contribution that moved the project forward in recent years.

Donald D. O'Dowd

David C. Beardslee

June, 1967

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Chapter I

INTRODUCTION

Significance of the Higher Occupational World

The purpose of this study is to investigate consistency and change in the images[1] of occupations. Before discussing the specific goals of the study a preliminary analysis will be presented of the significance of the higher level professions and occupations. This will be followed by a discussion of several considerations supporting a specific concern with occupational images. Finally, a summary will be given of the main findings of Cooperative Research Project No. 562, which is a principal source of the issues explored in this report.

In recent years there has been an increasing tendency for influential social observers and commentators to identify the use of leisure as a major concern of society (e.g., Kaplan, 1960). At the same time a new public awareness has begun to emerge about a range of massive social problems that can be solved only by straining the resources of a great society to their limits. Among these problems of enormous complexity and consequence are population, poverty, civil rights, urban blight, crime, mass transportation, air and water pollution, quality education, and international security. Given these overwhelming challenges, it is clear that work is the great future concern of society. In a short time the nation has come to manifest a general awareness of its "unfinished business." It appears that the arena in which the productive energies of the United States converge is changing, but the main emphasis of the nation is still on solving problems through the application of human talent and energy. The conditions are not yet right to sustain a leisure-oriented society. Perhaps the task of this generation is to work to create the conditions that will nourish a fruitful pursuit of leisure interests in the future.

---

[1] "Image" will be used throughout this report as a synonym for "stereotype." The term stereotype was introduced by Lippman (1922) and gradually acquired negative connotations by its use in connection with studies of racial, ethnic, and religious prejudice. The word image is now widely used to describe the public perception of a product, an individual or an institution, and it has remained neutral in value terms for the most part.

A series of forces has converged at this moment in history to emphasize the importance of the higher occupational world. First, the technological complexity of society has created an accelerating demand for people with relatively rare talents and personal qualities. A complex technological economy works upon itself to invent a multiplicity of interdependent, highly specialized occupational roles. In effect, an automated society may create leisure for one segment of the economy while it generates excessive demands on the masters of the automated system. It is commonplace to observe that the most highly skilled members of a technologically advanced economy are chronically overworked. Second, a period of full employment and affluence has produced a great demand for very specialized services such as education, health care, technological innovation, information and entertainment. Each of the professional fields has responded to the pressure for greater service by expanding its ranks, developing new categories of sub-professionals, and seeking the economies of automation. Third, the marked increase in access to and diversity in higher education supported by state and federal funds has created a design shop for shaping new occupations and professions. In the United States the growth of the system of higher education has brought into sharp focus the significance of a differentiated and selective occupational world. These three forces; technological complexity, affluence, and higher educational opportunity, contribute to the creation of a climate in which the selection of a career emerges as an issue of central importance.

The importance placed by society on the structured upper levels of the occupational world is illustrated in various ways. For example, in recent months the nation has been exposed to considerable discussion in the press about high government concern for the "brain drain" of high-level technical personnel from Europe. The sphere of best-selling books reflects the importance of the occupational world with such examples as Intern, by Dr. X.; Elizabeth Appleton, by John O'Hara; or the novels of C. P. Snow dealing with the interlocking worlds of science, the universities, and government administration. Virtually every organization of professionals in recent years has complained bitterly and publicly that it is not receiving its "fair share" of the intellectual talent of the nation. The Engineering Manpower Commission of the

Engineers Joint Council has pointed with alarm every year for a decade to the lack of expansion in baccalaureate level enrollments in engineering. During the past two years, the business community seems to have become aware that it may not be competing effectively for talented college graduates, according to articles in the New York Times and the Wall Street Journal.

The awakening of the nation to its internal frontiers and the increasing complexity of society have combined to make the United States most sensitive to the economic and humane allocation of scarce human talent to important social roles. This has resulted in raising the importance of career choices and the visibility of the occupational world to an unprecedented level. Mass media coverage, expanding guidance and placement services, and a new emphasis on professional recruitment all attest to this change.

In the light of the great importance of the higher level occupational world, what is the meaning of choosing a career to a college student? It is obvious that the selection of an occupation commits the student to certain repetitive tasks that are the substance of his job. However, interviews with students have indicated that most college undergraduates in the arts and sciences, at least, have very little conception of how they will spend their hours as an adult on the job. Students could not describe the eight-to-five routine of their future occupation, and when pressed for an answer they responded with embarrassment or anger. It was found that students are capable of describing in some detail the implications of their future occupation for a general style of life. In relatively unstructured interviews college students were able to describe the personality, behavior patterns, social status, political interests and other features of present participants or future entrants into a number of occupations and professions. In other words, students had a much more secure sense of the life-style features of an occupation than its on-the-job demands. An early report of these interview studies is contained in Beardslee and O'Dowd (1958).

These findings were in agreement with the observations of David Riesman (1953) and William H. Whyte, Jr. (1957) that the college student generation of the fifties was oriented primarily to the social and personal texture of its environment rather than to political, economic, and religious values. Philip Jacob's influential book, Changing Values in College (1957), gave additional support to this view of student values. Subsequent studies of student orientations in connection with the Occupations Project suggest that the majority of contemporary college students share the outlook of their predecessors. More recent commentators on college students, such as Raushenbush (1964) continue to be impressed with the orientation of students to the human and interpersonal dimensions of society.

These considerations suggest that the selection of an occupation commits a college student in his judgment to a wide range of future experiences. The student believes an occupation will specify the kind of activity in which he will engage for a number of years. It will relate him to a society of colleagues with specific, anticipated qualities. His occupational choice will determine his social status and mode of community participation, imply that he has certain personality characteristics, and specify a complex of activities describing his style of life. The great importance of the occupational choice is emphasized by these broad consequences.

The psychological significance of occupational choice in the establishment of a sense of identity is described in the work of Erikson (1950), and Myers and Roberts (1959) among others. They point out that the developing self-concept of a young person is often anchored in the sequence of experiences leading through an educational program into the world of work. The clarity of the implications of a future occupational role is important in providing a rounded and detailed image that can stabilize a firm sense of self. It is not surprising that the conception of an occupation that must carry this important burden will acquire a number of status, social, personal, and behavioral connotations.[2]

A series of preliminary research studies in 1957 and 1958, described in Beardslee and O'Dowd (1958), led to the design of a study entitled College Student Images of a Selected Group of Professions and Occupations by O'Dowd and Beardslee (1960). This research project was based on the issues and observations described above and was designed to attain three goals. First, it sought to verify the hypothesis that college students make careful and consistent distinctions among high-level professions and occupations in terms of social, personal, and style-of-life dimensions. Second, the study attempted to obtain an insight into the values of college students as these are revealed by the way students think about the occupational world. Third, the study was intended to provide information on the relation between vocational choice and the perception of occupations.

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[2] The general issues discussed in this section receive fuller treatment in Beardslee and O'Dowd (1961).

Since the original study is not readily accessible, a brief summary of its findings will be presented in a series of numbered paragraphs. These results served as the base on which the research goals of the present study were developed.

1. Occupational titles were found to be consistently associated by college students with specific life-styles, patterns of inter-personal relationships, and personality characteristics. Each of 15 occupations had a highly articulated, distinctive, and unique image. The images of all the occupations were generally positive since they were all of relatively high status and important to society.

2. The images of the occupations were held in common by all samples of college students to a remarkable degree. There appeared to be a general system of views about occupations that was shared by eastern liberal arts undergraduate students.

3. Students responded to the series of 15 occupation titles in a complex and organized manner. Factor analysis identified four major orthogonal dimensions of response that organized the data provided by students. These factors were interpreted to define the occupational world-view of eastern college students.

4. The location of specific occupations in factor space provided valuable evidence on their perceived properties. When this data was combined with trends in occupational choice, many of the apparent anomalies in student occupational preferences were resolved. The same data gave some exciting and encouraging clues to the value orientations of college students.

5. A careful analysis was carried out of the qualities of each of the 15 occupations. This revealed the heroic quality of the doctor, the relative superiority of the professions, and the dismal image of the accountant. In general the lower-status business fields were invested with weaker qualities than the professions.

6. A careful study of the effects of demographic dimensions revealed only small differences in the occupational stereotypes held by various groups of respondents. Sex, type of institution (public or private), year in college (freshman or senior), socio-economic status of parents, and family occupational status (business or professional) were all investigated and yielded but small differences.

7. Lastly, it was learned that men indicated they would most like to enter the occupations with the most positive images. Women, in turn, stated that they preferred to marry men who were planning to enter the most glamorous and rewarding fields.

The first study concluded with a series of questions that are answered in this report.

Objectives of the Study

The objectives of the second phase of the Occupations Project are stated in general terms in this section. They were derived in large part from unanswered questions that were raised in the first study. Other questions were generated by areas of omission that became apparent when the first results were shared with various publics. Only the broad research objectives are described in this section. The more detailed and specific hypotheses and questions will be noted in the descriptions of the component studies that make up the body of the report.

An important research question follows naturally from a main trend that was observed in the first study. Is it possible that the images of occupations are a segment of a verbal system, a system of meaning, that is shared by a large number of educated Americans? Should this be the case, a complex and differentiated system of connotative meaning will have been identified that can be used in studies of values, communications, and the establishment of meaning. By combining data from the first study with new data gathered in the second study a unique opportunity was obtained to examine the consistency of beliefs across a diverse population.

A second opportunity to search for consistency in the images of occupations was presented by the possibility of comparing the factor structure of responses to occupations from a series of divergent samples. Can evidence be developed that the fine structure of interrelationships in response patterns to occupations are similar for a series of groups? This would suggest that a cognitive structure could be defined that would describe how a group of people--or many groups--organize their responses to real stimuli. Theoretically, attitudes and values of general importance could be inferred from such an analysis, should it prove stable.

A by-product of this search for a consistent cognitive structure would be an opportunity to explore several "shadow" factors that were discernible but not clear in the first study. Therefore, an important goal of the study was either to verify or refine the "structure of meaning" described in the original report. Both of these aims were dependent upon combining data from the earlier research with that obtained in the current project.

The original set of 15 occupations was carefully chosen, but inevitably it excluded some interesting alternatives. In this study provision was made to include additional occupational titles. Some of these were intended to provide new profiles in previously neglected fields, such as minister or writer, while others, such as bookkeeper and attorney, were designed to enrich the interpretation of occupations on which a body of results had been gathered.

Consistency in the occupational images can be analyzed in a cross-sectional manner as it was in the first study; that is, several different samples tested at one time can be compared. It is also desirable to determine whether the images change over time. This can be studied by comparing cross-sectional investigations many years apart, as has been done with the prestige rankings of occupations by Roe (1956). However, it is often preferable in studying the impact of time on attitudes and beliefs to conduct a longitudinal study in which the same sample of respondents is tested on successive occasions. In this research program, a longitudinal study of four years duration was developed with a college population with the aim of studying consistency and change in images under the most rigorous conditions.

Since all of the work in the first study involved undergraduate liberal arts students, it was possible that the observed consistency in images resulted from particular features of that population. It was hypothesized that pre-professional undergraduate students would have the greatest likelihood within the college student population of deviating markedly from the established liberal arts response modes. Therefore, it was proposed to test the occupational stereotypes of major undergraduate student groups associated with clearly defined pre-professional curricula in separate (non-liberal arts and sciences) schools. The study was later extended in search of a limiting case in the professionally-oriented category of college people to include a sample of graduate professional osteopathic medical students.

The first study was limited to samples of college students from the eastern college circuit. A number of experienced researchers and published results by Remmers and Radler (1957) and Campbell (1960) suggested that the perception of occupations might differ from one region of the nation to another. It was suggested that the pragmatic Midwest, in particular, would be likely to harbor students with a distinctive regional outlook on the occupational world. Therefore, samples of midwestern private and public university students were tested for comparison with similar groups of eastern students. It was also planned to study the effect of demographic variables on the images of occupations in these new groups in the search for regional variations.

A small but revealing study was initiated under separate auspices during the period between the first and second stages of this project. A random sample of college faculty at one of the eastern colleges was included in the basic research design. It is possible to compare their responses with those of their students in the interest of measuring the influence faculty might have on student views. It would be reasonable to predict that senior students in comparison with freshmen would converge toward the faculty perceptions of occupations, assuming that faculty have differing views in the first place. The analysis and interpretation of some of the faculty data was included in this larger study design.

During the course of this research a new social issue was assuming ever greater significance. This was the growing concern about improving opportunities for using the energies and talents of women in the occupational world (e.g., Dennis, 1963). Considerable interest was being expressed in how women view the world of work. Therefore, the study was broadened to include a new questionnaire derived from the basic research instrument and designed to investigate the perception of occupations entered by women. Such questions as the impact of including women in an occupation on its perception by men and women could be investigated with this instrument. The main value of the work would be to provide a first baseline indicator of the perception of the female world of work.

A final main emphasis of the research is concerned with studying the pre-college origins of the images under investigation. Several of the studies previous to this work, including that of Mead and Metraux (1957), were done with high school groups. It was desirable to trace the development of the images from early high school through college. Changes in images could be traced and their relations to college orientation could be investigated. Do those youngsters with college plans have a different view of the higher-level professions and occupations than a group with more limited goals? Are there differences among different high school populations such as rural, suburban, and urban students in the perception of occupations? It was proposed to answer these and other important questions by studying the views of selected samples of high school youngsters. This is not the only point at which the development of occupational images can be traced, but it is a key point of origin.

Several other issues of interest were investigated in the context of the overall research scheme. These included a study of various behavioral consequences of the stereotyped responses to occupations, a study of the relation of personality variables to individual response styles in rating occupations, and an investigation of the hierarchy of stereotypes including occupational stereotypes.

The paragraphs in this section summarize the research objectives and general hypotheses that guided four years of research effort. A large number of specific questions and hypotheses are included in the body of the report as they relate directly to particular lines of investigation. There was no intention to follow a classical research design in developing this project. On the other hand, this endeavor results in much more than a simple taxonomic outcome. It represents a successful attempt to chart a complex and important attitudinal area with reference to its contours, extent, origins, tendencies to change, implications for neighboring fields, behavioral consequences, and underlying structure. The writers know of no other set of images or stereotypes that has been so thoroughly explored. The significance of these images as guides and clues to the career directions followed by college youth must not be underestimated.

Related Research

There are a number of traditional research areas that relate to the study of occupational images. The design of the Occupations Project has drawn upon established findings at many points and can be related meaningfully to them. On the other hand, the Occupations Project gradually assumed unique features as the mass of data accumulated. In an important sense the study generated many emphases that have rarely been explored in other researches.

First, it should be noted that there is very little literature directly concerned with the content of occupational images. Many writers on vocational guidance and the sociology and psychology of occupations assume the existence of occupational stereotypes, but they rarely specify their characteristics. A survey of the literature reported in O'Dowd and Beardslee (1960) points out that most of the relevant research is concerned with establishing the existence of occupational stereotypes rather than analyzing their properties.

It is important to describe in connection with this report the small array of publications that bear directly on this study. These are the studies concerned with exploring the properties of the occupations. A body of findings and an appropriate methodology is gradually emerging from this work. The first research effort that the writers have discovered was by W. A. Anderson (1934), in which he studied the stereotypes of a series of occupations. Anderson raised most of the questions explored in this and the previous study, but he was unable to answer them because the masses of data requiring laborious hand-tabulation were beyond his resources to control. The next study foreshadowed the development of the semantic differential. It was a study of the images held by college students of 15 occupations reported by Osgood and Stagner (1941). A series of reports published in the 1950's reflected a growing interest in occupational stereotypes. Among the important papers were those by Stagner (1950), Haire and Grunes (1950), Grunes (1957), Reeb (1958), Walker (1958), and Davidson and Riesman (1959). The semantic differential reappeared as a technique for investigating occupational images in studies by Nunnally and Kittross (1958) and incidentally in the atlas of semantic profiles compiled by Jenkins, Russell and Suci (1958). Since 1960 the awareness of occupational images has been evidenced by their investigation in the context of a number of diverse studies about the professional and business world (e.g., Kilpatrick, Cummings, and Jennings, 1964).

The Occupations Project has investigated more occupations in richer contexts with a wider range of scales and techniques than other investigations. At a number of points, the results from this study intersect those produced by other researchers as the text will indicate. Hopefully, the consistent set of results that emerge from this report and its antecedents will provide a body of reference data of value to any researcher seeking to understand a single occupation, a group of occupations, the choice of occupations, and changes in the perception of occupations.

Procedure

Questionnaire Instruments

The occupations questionnaire was developed for use in the first phase of the study. It was designed so that a respondent was asked to rate each of 15 occupations on 34 two-ended, seven-point rating scales. Each scale was defined by a pair of terms of approximately opposite meaning, located at the two ends of the scale. Each occupation was to be rated in terms of the degree to which it was "very closely related" to either one end or the other of the scale. Two forms of the occupations questionnaire constituted the basic research instruments of the first study. A third form of the occupations questionnaire was developed for the extension of the research contained in this report. Additional instruments were developed for use in the smaller substudies, and they will be described in connection with the specific studies in which they were used.

Two overlapping forms of the questionnaire were used in the first study to permit the exploration of the widest possible range of scales. Twenty-one scales that were common to the two forms (J = joint) are listed in the first part of Table 1. The scale number indicates its serial position in the questionnaire. The opposed defining terms for each scale are ordered to the left and right as they were in the questionnaire. The "desirable" ends of the scales are arrayed to left and right so that approximately equal numbers of desirable alternatives appear on each side of the page. The J-scales were developed as a result of two years of pre-test interviews, preliminary questionnaire studies, and data analyses. Whenever scales in the questionnaire were selected to measure particular dimensions or factors, they were separated by scales from other dimensions. The O-form of the questionnaire contained the 21 J-scales and 13 additional scales representing five of the major factors of meaning from Osgood, Suci, and Tannenbaum (1957). The second part of Table 1 lists the scales used only in the O, or Osgood, form. The C-form of the questionnaire consisted in 13 scales representing the first seven factors in personality ratings located by Cattell (1957) in addition to the 21 J-scales. Part three of Table 1 lists the C-scales. On the basis of work with the O and C forms, a third form of the questionnaire, A-form, was designed for use in this second major study. The A-form contained 15 J-scales, 8 O-scales, and 11 C-scales. These scales were selected either because of their intrinsic interest (e.g., powerful in public affairs--not powerful in public affairs) or because they were

Table 1

SCALES USED ON THE TWO ORIGINAL FORMS OF THE OCCUPATIONS QUESTIONNAIRE

Scale No.	Scales Used on Both Original Forms		
1 J	wealthy	......	not well-to-do
2 J	conformist	......	individualist
3 J	has a pretty wife	......	wife is not pretty
4 J	doesn't play poker	......	plays poker
5 J	has good taste	......	has poor taste
6 J	unhappy home life	......	happy home life
7 J	cleancut	......	strange
8 J	low opportunity for advancement	......	high opportunity for advancement
9 J	plays chess	......	doesn't play chess
10 J	not interested in art	......	interested in art
11 J	high social status	......	low social status
12 J	unsuccessful	......	successful
13 J	great personal satisfaction	......	little personal satisfaction
14 J	doesn't play bridge	......	plays bridge
15 J	powerful in public affairs	......	not powerful in public affairs
16 J	socially unpopular	......	socially popular
17 J	radical	......	conservative
18 J	worthless	......	valuable
23 J[a]	optimistic	......	pessimistic
32 J[b]	calm	......	excitable
34 J[c]	personally effective	......	personally ineffective

---

[a] This scale appears as #23 on the Osgood form and #27 on the Cattell form.

[b] This scale appears as #32 on the Osgood form and #21 on the Cattell form.

[c] See page 14

Table 1--Continued

Scale No.	Scales Used only on the Osgood Form		
19 0	deep	......	shallow
20 0	changeable	......	stable
21 0	active	......	passive
22 0	colorless	......	colorful
24 0	soft	......	hard
25 0	hot	......	cold
26 0	rash	......	cautious
27 0	interesting	......	boring
28 0	selfish	......	unselfish
29 0	wise	......	foolish
30 0	weak	......	strong
31 0	sensitive	......	insensitive
33 0	rational	......	intuitive

Scale No.	Scales Used Only on the Cattell Form		
19 C	adaptable in habits	......	inflexible in habits
20 C	unintelligent	......	intelligent
22 C	has emotional problems	......	has no emotional problems
23 C	self-assertive	......	submissive
24 C	depressed	......	cheerful
25 C	persevering	......	quitting
26 C	indifferent to people	......	attentive to people
28 C	evasive about life	......	realistic about life
29 C	thoughtful	......	unreflective
30 C	unsure	......	confident
31 C	self-sufficient	......	attention-demanding
32 C	irresponsible	......	responsible
33 C	sociable	......	retiring

markers (e.g., calm--excitable) on the four main factors and two shadow factors in the first study. All the scales included in the A-form are listed in Table 2. Whether the scale is from the O-form or C-form is also recorded in Table 2. Sample pages from all three forms of the questionnaire are contained in Appendix A.

The name of the occupation to be rated was printed at the top of each questionnaire page, as illustrated by the sample pages in Appendix A. Every subject received a questionnaire containing an instruction page followed by 15 pages, each of which carried the name of a different occupation to be rated. For a given subject the 15 pages contained the same scales in the same order; that is, he received either the O, C, or A form of the questionnaire. The standard set of 15 occupations is listed in Table 3. The order of the 15 occupations in the questionnaire was randomized from subject to subject to control for order effects.

The thirty-fourth scale listed at the end of every questionnaire page was designed to elicit a general and overall summary response to the qualities of the occupation being rated. The scale was printed as follows:

> 34. In summary, what do you think is the general personal effectiveness of the PERSONNEL DIRECTOR?
>
> personally effective ...... personally ineffective

The last page of the questionnaire contained a scale that was purposely separated from all the others. It shifted the set of the male respondent to the expression of an idealized preference for each of the 15 occupations that he had already judged. This scale is referred to later in this report as the "like-to-be" scale. The instructions read as follows:

> Rate each of the following occupational positions according to how much you would like to enter them if you were free to make the choice without regard for training, ability, or time and expense required for specialized study. In other words, rate each occupational position in terms of how much you would like to be in it if you could be in any occupation you wanted.
>
> 1. Accountant like to be ...... not like to be

The 15 occupations were listed alphabetically against the like-to-be scales as shown in a sample page in Appendix A.

Table 2

SCALES USED ON THE A-FORM OF THE OCCUPATIONS QUESTIONNAIRE

Scale No.	Scales used on the A-Form	
1 J	wealthy	not well-to-do
2 J	conformist	individualist
3 J	has a pretty wife	wife is not pretty
32 C	irresponsible	responsible
21 0	active	passive
28 0	selfish	unselfish
7 J	cleancut	strange
32 J	excitable	calm
10 J	not interested in art	interested in art
23 J	optimistic	pessimistic
20 C	unintelligent	intelligent
31 C	self-sufficient	attention-demanding
6 J	unhappy home life	happy home life
24 0	soft	hard
11 J	high social status	low social status
22 C	has emotional problems	has no emotional problems
13 J	great personal satisfaction	little personal satisfaction
26 0	rash	cautious
15 J	powerful in public affairs	not powerful in public affairs
22 0	colorless	colorful
23 C	self-assertive	submissive
24 C	depressed	cheerful
25 C	persevering	quitting
26 C	indifferent to people	attentive to people
17 J	radical	conservative
28 C	evasive about life	realistic about life
29 0	wise	foolish
16 J	socially unpopular	socially popular
31 0	sensitive	insensitive
30 0	weak	strong
33 C[a]	sociable	unsociable
18 J	worthless	valuable
30 C	unsure	confident
34 J[b]	personally effective	personally ineffective

[a] The "undesirable" term was changed from retiring to unsociable with no measurable effect.

[b] See page 14

Table 3

REFERENCE SET OF OCCUPATION TITLES

Identifying No.	Name
01	Accountant
02	Artist
03	Business Executive
04	College Professor
05	Doctor
06	Engineer
07	Industrial Manager
08	Lawyer
09	Office Supervisor
10	Personnel Director
11	Retail Store Manager
12	Sales Manager
13	School Teacher
14	Scientist
15	Social Worker

Women responded to an amended version of the like-to-be scales. They were asked to "Rate each of the following occupational positions according to how much you think college men would like to enter them if they were free...." Women were requested to judge the attractiveness of these occupations to men as idealized choices.

The instructions for the form of the questionnaire designed for men are reproduced in Figure 1. They constituted the first page of the questionnaire and were printed on a bright yellow paper in order to increase the visibility of the questionnaire. The instructions were adapted from those used by Osgood, Suci and Tannenbaum (1957).[3]

The last page of the men's Osgood and Cattell forms requested several items of personal background information. The student was asked to list his academic major or intended major, his intended occupation, and a detailed description of his father's present occupation, or last job if retired or deceased. The men were also asked to classify the type of community in which they spent most of their childhood. Finally, the like-to-be scales completed the questionnaire.

Women who responded to the Osgood and Cattell forms were asked to complete two pages at the end of the questionnaire. The first page presented the young woman with questions about her major or intended major, her father's occupation, the type of community in which she spent most of her childhood, and the standard like-to-be scales presented exactly as for men. That is, the woman was asked what she would like to be under ideal circumstances. An additional question on this page designed to elicit information about career plans read:

> After graduation, do you plan to make home and family your career, or have you other plans?
>
> Plan home and family career __________________
> Plan to work part time as __________________
> Plan to work full time as __________________

---

[3] The writers are grateful to Dr. Charles E. Osgood for granting permission to adapt the instructions that were developed for use with the semantic differential to the needs of this research.

Figure 1

Name: ....

Class: .... **College or University:** ....

INSTRUCTIONS

The purpose of this study is to find out the impression that people have of various occupations by having them judge the occupations against a series of descriptive scales. In taking this test, please make your judgments on the basis of what *you* feel about these occupations. On each page of this booklet you will find a different occupation to be judged and beneath it a set of scales. You are to rate the occupation on each of these scales in order.
Here is how you are to use these scales:

If you feel that the occupation at the top of the page is *very closely related* to one end of the scale, you should place your check-mark as follows:

has a pretty wife ..√..:......:......:......:......:......:...... wife is not pretty

or

has a pretty wife ......:......:......:......:......:......:..√.. wife is not pretty

If you feel that the occupation is *quite closely related* to one or the other end of the scale (but not extremely), you should place your check-mark as follows:

low social status ......:..√..:......:......:......:......:...... high social status

or

low social status ......:......:......:......:......:..√..:...... high social status

If the occupation seems *only slightly related* to one side as opposed to the other side (but is not really neutral), then you should check as follows:

intelligent ......:......:..√..:......:......:......:...... unintelligent

or

intelligent ......:......:......:......:..√..:......:...... unintelligent

The direction toward which you check, of course, depends upon which of the two ends of the scale seems most characteristic of the occupation you are judging.

If you consider the occupation to be *neutral* on the scale, both sides of the scale *equally associated* with the occupation, or if the scale is *completely irrelevant*, unrelated to the occupation, then you should place your check-mark in the middle space:

pessimistic ......:......:......:..√..:......:......:...... optimistic

IMPORTANT: (1) Place your check-marks *in the middle of spaces*, not on the boundaries:

This *Not This*

......: √ :...... ......:......√......:

(2) Be sure you check every scale for every occupation—*do not omit any.*

(3) Never put more than one check-mark on a single scale.

You will notice that the same scales are used for each occupation, so *do not look back and forth* through the scales. Do not try to remember how you checked similar scales earlier in the test. *Make each item a separate and independent judgment.* Work at fairly high speed through this test. Do not worry or puzzle over individual items. It is your first impressions, the immediate "feelings" about the occupations, that we want. On the other hand, please do not be careless, because we want your true impressions.

The second page for women respondents contained the like-to-be scales as they involve college men that was described earlier, and a question designed to explore the relationship between marriage plans and the occupational world, which stated:

> Think about or imagine the man whom you might wish to marry.
>
> What would please you most as an occupation for him? ______________________
>
> What would please you least as an occupation for him? ______________________
>
> What do you think is the most probable occupation of the man you might wish to marry? ______________

The personal background pages were modified somewhat for form A of the occupations questionnaire. The men's form contained two pages. The first page asked for information on present or intended major, father's occupation, and the student's childhood community experience just as in the O and C forms. In addition, the student was requested to record the educational level at which his father terminated his schooling, and to indicate his personal occupational intention plus the names of other occupations that he might be considering. The second page of form A for men contained only the like-to-be set of scales.

The background pages for women in form A extended to four. Page one inquired of major or major plans, personal career plans, father's occupation, and childhood community experience as in the O and C forms. This page also contained the new question mentioned above about father's education. Page two contained only the woman's own like-to-be preference scales. Page three of form A included a new set of questions which will be referred to as the "like-to-marry" scales. The question was organized as follows:

> Think about or imagine the man whom you might wish to marry.
>
> Rate each of the following occupational positions according to how much they would please you as an occupation for the man you might wish to marry if he were free to make the choice without regard for training, ability, or time and expense required for

specialized study. In other words, rate each occupational position in terms of how much it would please you as an occupation for the man you might wish to marry if he could be in any occupation he wanted.

1. Accountant very pleased ...... not pleased

The 15 occupations were listed as in the like-to-be set. An extra item was placed after occupation 15, Social Worker, and it read:

What do you think is the most probable occupation of the man you might wish to marry? ________________

The final page of form A for women contained the scales on which women estimated the men's like-to-be scores.

It should be noted that women were asked throughout the body of the questionnaire to judge occupations for a man's world. Since the husband's occupation has such great implications for a woman's social location and life's experience, it is important to compare the views of women and men on the connotations of occupations for men. This is particularly true when the men and women students share the same educational, social, and cultural environment.

The Osgood and Cattell forms were distributed to random halves of the samples which were part of the first study. Randomly selected participants in the second main study received the A, O, and C forms. All versions of the occupations questionnaire were printed commercially on good quality, medium weight paper. Additional variations of the main occupations questionnaire will be described in several of the later chapters.

Subjects and Samples

The data that will be reported in the ensuing chapters were obtained from ten undergraduate arts and sciences colleges, three undergraduate professional schools, one graduate professional school, one group of faculty, and six high schools. The basic reference data were obtained from student samples at six colleges and universities. These institutions included an eastern and a midwestern public coeducational university, two eastern private men's colleges, an eastern private women's college, and a midwestern private coeducational college. Each of the private colleges is highly selective and they vary in size from 1,000 to approximately 2,000 students. The two public universities are among the largest and most highly regarded in their regions. In all cases the reference data is based on undergraduate students majoring in the liberal arts and sciences. Selected characteristics of the samples of students from each school are summarized in Appendix B.

The best available listing of currently enrolled students was obtained at each institution. In four cases this was the student directory and in two cases it was the registrar's official listing of enrolled students. From these lists a random sample was drawn from the freshman and senior student categories. At the private colleges all of the students included in the study were full-time residential students. A large percentage of the public university students was enrolled full time, but an undetermined small percentage was registered on a part-time basis. The public university students either lived on the campus or in the immediate vicinity. Any student residing more than five miles from the campus was dropped and replaced in both public university samples. These procedures were intended to insure that each sample would be an adequate representation of the full-time undergraduate liberal arts and sciences students living within the sphere of influence of campus life.

The success of the questionnaire distribution procedure was not consistent from one college to the next. It should be noted that completion of the questionnaire takes a college student from 40 minutes to an hour. Despite the views of some faculty members, students believe that they are very busy and they guard their time with care. To convince a student to complete this outside-of-class questionnaire was a major undertaking. Each group of students, defined by college, sex, and class, was treated as an independent sampling unit. That is, the data were organized into units such as freshmen men at eastern men's liberal arts college A or senior women at the midwestern public university. Table 4 lists the number and percentage of completed questionnaires obtained from 18 sampling units in the main reference study. As a result of six years of work with probability samples from college student populations, the writers believe that a 90% questionnaire completion rate represents an ideal level for making inferences about the total population. However, work with the data reveals no measurable differences between 90% samples and those in the 85% completion range. Therefore, the latter provide good estimates of target population characteristics. Among the private colleges only one sampling unit is below acceptable limits, the eastern men's private liberal arts college B senior group. In this case the questionnaire was distributed as part of a large longitudinal study. A severe case of test weari-

Table 4

NUMBER AND PERCENTAGE OF COMPLETED QUESTIONNAIRES, BY COLLEGE, SEX, AND CLASS

Private Colleges

	East.Men's Lib.Arts A		East.Men's Lib.Arts B		East.Women's Lib.Arts		Midwestern Coed.Lib.Arts Men		Midwestern Coed.Lib.Arts Women	
Class	N	%	N	%	N	%	N	%	N	%
Sr.	77	90.6	158	61.2	105	89.0	99	86.1	109	90.8
Fr.	77	90.6	117	100.0	114	95.0	116	98.3	102	87.9
Total	154	90.6	275	73.3	219	92.0	215	92.3	211	89.4

Public Universities

	Eastern University Men		Eastern University Women		Midwestern University Men		Midwestern University Women	
Class	N	%	N	%	N	%	N	%
Sr.	126	94.0	119	92.2	145	58.9[a]	72	63.2
Fr.	131	85.1	154	95.1	87	77.7	88	79.3
Total	257	89.2	273	93.8	232	64.8	160	71.1

[a] This percentage, 58.9, is a composite of two figures. In the first sample represented in the three adjoining cells only 39 senior men, or 34.2% of those listed, produced completed questionnaires. This was largely a function of the residential pattern of senior men in this college town. A second sample of senior men was drawn in the following year and pursued with great effort. Of this second sample 106, or 80.3%, were willing to cooperate in the study. The two senior men's samples were compared on the images of all 15 occupations and found not to differ significantly. Therefore, in order to increase the senior men's total number of questionnaires, the two groups of subjects were pooled.

ness and senior rebelliousness reduced the cooperativeness of this long-suffering group. An intensive follow-up was foreclosed by the continuing interests of the established research program of that campus. Fortunately, this sample is very similar in all major respects to the corresponding group of seniors in men's liberal arts college A. This permits the substitution of the stronger sample when possible respondent bias is a consideration.

Of greater concern is the status of the entire midwestern public university sample. This was by far the most difficult sampling problem in the entire study. The percentages listed in Table 4 are biased downward in that no allowance has been made for drop-outs and chronically unavailable students. On the basis of a later sampling study, it was determined that on this 30,000+ student campus approximately 15% of a probability sample of undergraduates fall into these categories. The procedure of the main survey did not provide a satisfactory estimate of this figure. The unsatisfactory percentage of completion can be attributed directly to poor staff organization combined with inexperience in dealing with survey problems on a large and socially fragmented campus. A subsequent probability sample of students on the same campus using every technique available to the interview team to obtain cooperation attained an 83% completion level. These comments on the midwestern public university sample indicate that inferences from the scale scores of this group should be viewed with caution. There is no reason to expect a particular bias in this sample, but there is considerable room for bias within the non-respondent percentages.

The 18 sampling units described in Table 4 contain 1,996 subjects who completed either O, C, or A forms of the basic questionnaire. The percent of completed questionnaires computed over this entire sample is 82.7. The nature of the data to be described in the later chapters will indicate that these samples are entirely adequate for making inferences and testing hypotheses about consistency and change in the images of occupations.

Questionnaire Administration

The occupations questionnaire was distributed to students by several different methods. The standard procedure was to hire undergraduate agents to contact students. These agents were selected on the basis of recommendations from university faculty members and administrators testifying that they were unusually reliable, well organized, and energetic students. The agents were given a brief orientation to the task and equipped with all of the materials necessary to carry out their responsibilities. Each agent was provided with a list of students that he was required to contact, and he was not permitted to make substitutions without the prior approval of his supervisor. The list of students always consisted of students of the same sex as the agent. Compensation was arranged in terms of a base hourly rate supplemented by a piecework bonus for completed questionnaires. The main responsibility of the agent was to contact the designated student, give him a questionnaire, explain the study, and request cooperation. The most common pattern was for the agent to return to see the subject within two or three days and collect the completed questionnaire. On occasion the subject was asked to put the questionnaire in an envelope and deliver it to the agent at some convenient location. When several agents were used on a campus the list of students to be contacted was randomly divided among the agents. It was found that approximately 100 subjects represented an optimum length of list for a given agent, since it permitted him to make his contacts in a finite period of time, and earn enough money to be worth his while. Whenever possible, the agents were encouraged to develop a vigorous follow-up procedure. Non-respondents were pursued by phone, mail, and regular call backs in all appropriate cases. Every effort was made within the limits of time and resources to bring the samples to as close to a 100% respondent rate as possible.

A careful study of non-respondents in all samples indicates that 1% of the subjects contacted would not cooperate at all with the study. These people rejected the questionnaire on political, social, moral, and other grounds. Another 4% of the subjects agreed to cooperate but for one reason or another could never be persuaded to complete the questionnaire. In the opinions of the agents these people were too disorganized or disinterested to fulfill their repeated promises to complete and return the questionnaire. The balance of the non-respondents were people whom the agents were unable to contact more than once and from whom they could not get any sense of willingness or unwillingness to participate in the study. Senior men have patterns of living and studying which make them extremely difficult people to locate. In large universities they tend to live in off-campus apartments and they change addresses frequently often leaving no forwarding address at their last place of residence. On the smaller campuses senior men are to be found on the athletic fields, in the fraternity houses, in clubs, and rarely at their official residence hall address. To a certain extent the rate of non-respondents in a given sample can be attributed to the ability of the agents to talk people into completing the instrument. The best agents were able to deliver completed questionnaires for 95% or more of the samples that were assigned to them, whereas the poorest agents tended to operate at the 75% to 80% level. Internal analysis of the data indicates no systematic differences between the samples obtained by the best agents and the poorest agents. In other words, agent ineffectiveness did not seem to produce a biased sample. Evidently, the ineffective agent compared to the strong agent simply obtained a smaller percentage of the various sub-categories of people in his sample.

Incomplete questionnaires proved to be a continual problem to the study. Since the subject was required to complete 15 pages and supply background information, it is not surprising that a number of subjects missed one or more pages in filling out the questionnaire. Approximately 10% of all the questionnaires returned contained incomplete pages. A technique was devised for returning incomplete pages with a special set of instructions to the respondents who had not completed their questionnaires. Approximately 80% of all those contacted in this way completed the questionnaires by filling out the pages they had missed in the first administration. Those who did not complete the returned pages have to be included in the non-respondent category although they cooperated with the study. Given the length and complexity of the occupations questionnaire, the success of the agents in obtaining cooperation from their fellow students was a commendable achievement.

Data Processing and Data Analysis

Each completed questionnaire was assigned a code number and the background data contained in the last pages were coded. This information was then transferred to IBM punch cards. For each subject, 525 columns of numeric information were entered on 15 IBM cards, one card for each occupation rated by the subject. In certain sub-studies additional cards were added to the basic deck for each subject. Each card contained identifying codes, coded background information, and the response of the subject to one occupation on the 34 basic scales. A variety of data processing techniques were used during the course of the study. The IBM model 101 statistical machine was employed in a number of counting routines. A model 407 accounting tabulator was used in the earlier part of the research to compare responses of groups of subjects in association with an IBM model 650 computer which was used to reduce the raw data to a series of summary scores. At later stages in the research the IBM model 1620 computer with two disk storage drives and an on-line printer became the basic data analysis instrument of the project. A series of special computer programs was written to handle the unusual questionnaire data generated by the study.

Properties of the Occupations Questionnaire

Reliability

The test re-test reliability of the occupations questionnaire has been explored in a number of different ways. The results of these analyses indicate that this questionnaire has a degree of reliability comparable with that found in personality rating instruments and semantic differential studies. One measure of the reliability of the questionnaire is the degree to which the 47 scales in the O, C and A forms are used in the same way by one group of subjects over a period of time to rate the 15 occupations. That is, what is the correlation of mean scale scores on 15 occupations for a group of subjects tested on two different occasions? This is not a standard reliability measure, but if these values are very high reliability must be high on any other conceivable measure of test re-test reliability. When 60 students were tested as new freshmen and second semester sophomores the mean correlation between scale values for the group on two occasions was +.92 with a range from +.70 to +.99. The 48 remaining subjects were tested again at the end of the senior year providing another two-year interval for a second re-test. On this occasion the mean scale correlation between the sophomore and senior testing was +.95 with a range of correlations over the 47 scales from +.86 to +.99. A third test re-test compared the mean scale scores on the questionnaire of 167 students tested at the beginning of their freshman year and again at the end of the senior year. This group of 167 subjects contained the 48 who were also tested during the sophomore year. The four-year test re-test mean scale score correlation was +.94 with a range from +.79 to +.99. These values indicate that the instrument has a reliability index of such a high level that it can be used with confidence in research settings where reliability is of direct concern.

Validity

The most obvious validity measure for data of this nature would be the decision of students to select careers as a function of their images of occupations. It is clear that the factors that guide a student to enter an occupation are far broader than the opinions or beliefs measured by the occupations questionnaire. Entry into an occupation is influenced by many forces which are external to the control of the student. Of great importance are his talent, ambition, intelligence, access to the appropriate education, the advice of his family, and other important pressures. In one sense the proper measure of validity is to determine whether the responses to this questionnaire represent the true ideas and impressions held by student respondents. It would seem reasonable to assume that student responses to the questionnaire represent that which they believe about the nature of the occupational world.

The most adequate measure of validity depends upon "correspondence" between expression in one medium and behavior in another. In a questionnaire study it is very difficult to obtain this kind of validation. The next best procedure is to search for a "coherence" criterion in which the internal relationships of the data offer a partial validation of the instrument. There are three types of internally coherent observations which lead to the inference that this is a valid questionnaire. First, open-ended interviews were conducted with a large number of college people who were asked to give their verbal impressions of the occupations included in the questionnaire. The interview data agreed very closely with the results obtained from the questionnaire instrument. Second, a sample of students was asked to write in essay form their impressions of these occupations in a classroom testing situation. In this case the written protocols showed a high degree of similarity to the profiles obtained from the systematic questionnaire investigation. Finally, the ratings on the like-to-be and like-to-marry scales which are included in various forms of the questionnaire showed that students expressed an ideal preference for those occupations which obtained the most desirable ratings on the questionnaire scales. In short, every effort to measure the belief system that is the concern of this report produced results that were consistent with the questionnaire method. The findings that will be reported in a later chapter on the views of pre-professional students about the occupational world serve as additional confirmation of the validity of the questionnaire. When all these lines of evidence are considered a good case has been built for the validity of this instrument. It is very hard to obtain stronger support for a paper and pencil device that is removed at some considerable distance from concrete measures of behavior.

Sequential Effects

Within each group of subjects the position of an occupation title in the questionnaire varied randomly from the first to the last position in the sequence of occupations rated. Therefore, group means were not influenced by the location of the occupation title from the first to the fifteenth position in the questionnaire. A separate analysis was conducted to determine whether an occupation was rated differently if it appeared either in the first three positions of the questionnaire or in the last three positions. This was done by selecting two groups of subjects in whose versions of the questionnaire a given occupation appeared either at the beginning or end of the questionnaire and comparing the mean scale values of the same occupations for these two groups. The results of this analysis indicated that there is no significant difference in the mean scale scores of an occupation as a result of its location at the extreme ends of the questionnaire. Additional analyses were carried out testing the effects of intermediate sequential positions for occupations. These analyses also indicated that position in the sequence of occupations did not materially effect the responses of subjects. Each occupation apparently was treated as an independent stimulus with relatively little interaction occurring between adjacent occupations. A similar analysis was conducted for scales located at different positions in the 34 scale set on different forms of the questionnaire. The results indicated that the mean scale values are not influenced significantly by their location on the page. The position of an occupation in the set of 15 or a scale in the list of scales does not influence the profile of an occupation that is produced by a group of subjects. Evidence will be presented later in the report showing that an occupation can be placed in the context of different occupation titles and show the same profile of scores it receives in the main occupation set listed in Table 3.

Additional Considerations

A number of choices which are made in the design of a research project may limit the generality of its results. There are at least three specific aspects of the present study which could constitute troublesome limitations. First, the set of occupations studied extends to only 15 titles. These occupations were selected because they are entered primarily by college graduates and represent by far the majority of all occupational roles entered by the graduates of colleges and universities. Additional titles have been added to the basic 15 in research to be reported in later chapters. When these new titles are combined with the original set of 15 occupations, an elaborate map of the occupational world can be constructed which indicates that this limitation of the research has now been reduced. The rather large number of business titles included in the basic list also merits a word of explanation. It was noted early in the research that there was a tendency for professional and business titles each to move independently of one another. Therefore, it seemed desirable to balance the professional list with several business occupations in order to have a reasonable distribution of these two basic categories in the main analysis. The wisdom of this move has been confirmed by later analytical work with the response data. An under representation of the business occupations would have made it difficult to obtain a differentiated factor structure from the array of data.

Second, the set of questionnaire scales presents an additional limitation on the generality of the results. These scales were selected for the study because their importance was indicated by the original interviews, early forms of the questionnaire, and a series of auxiliary studies. Secondly, they were drawn from among the best sets of scales available in the literature at the time the research was initiated. Every item included in the scale set was justified by the research efforts either of the Occupations Project or other investigations of major significance.

Third, the instructions used in the questionnaire require some additional explanation. The title of an occupation such as college professor, doctor, or industrial manager appeared at the top of each page, rather than a phrase such as "a man who is working in medicine" or "a college student who intends to become an industrial manager." This choice was made because most of the available research in the literature makes use of occupational titles rather than descriptions. In addition, the longer descriptive phrases are more difficult to work with and sometimes they are confusing to subjects. In the instruction page, the students were requested to rate occupations rather than men working in these fields or college students who intend to enter these occupations. There is no agreement among investigators as to which is the most appropriate procedure. Two pieces of evidence which have been developed in the course of this research support the belief that any of the three techniques is equally useful and all three emphases will produce the same results. In the women's study to be reported later, strong evidence was produced that the stimulus phrase, "college women who are preparing for 'a particular field'" either on a full-time, an interim, or a delayed career basis, led to the same general results as the occupation title alone. In addition, an unpublished study by Bowers (vide, Beardslee and O'Dowd, 1958) demonstrated that when the phrase, "a student who intends to go into" a particular occupation was rated there was very high agreement with the mean scale values assigned the unqualified occupational title by another group of subjects. The image of the "college professor" correlated +.95 with the image of the "undergraduate who intends to go into college teaching," and the image of the "business executive" correlated +.88 with the image of an "undergraduate who plans to go into business." On the basis of the women's study and the Bowers investigation, it appears that the occupational title is the most economical stimulus to use on each page and in the instructions and it will yield results almost identical with those generated by more elaborate descriptive phrases.

Chapter II

CONSISTENCY IN THE IMAGES OF OCCUPATIONS

The Problem of Consistency

The central theme of this report and the principal discussion in this chapter can be summarized by observing that consistency in the images of occupations is the hallmark of many minds. The series of investigations extending from 1957 to 1966 that constitute the Occupations Project provided an unusual opportunity to assess the stability of a system of beliefs. Rarely have so many independent samples been drawn from a broadly defined population and tested with an instrument which provides a rich sample of responses within one verbal system. The target population can be defined as people involved directly in college education, and the verbal system is that associated with the titles of major high-level professions and occupations.

The most important feature of the images of occupations as they were described by the five thousand respondents who participated in this study was the very marked agreement between all groups of subjects on the structure and content of these images. If all of the occupations were viewed in essentially the same way, if college professor and business executive were very similar, then the general consistency of images would represent a trivial tendency. However, because the images of individual occupations were highly distinctive and quite different from one another, the emergence of a consistency of response from many groups is potentially very interesting. In the earlier study by O'Dowd and Beardslee (1960) the large and statistically significant differences between the images of different occupations were discussed at length. For example, doctor, lawyer, and accountant each had a very different meaning for the respondents. In the context of this differentiation of images, all segments of a varied population were in basic agreement on the images of all occupations examined in this research. That is, respondents in every sample perceived the doctor in the same basic way as respondents in every other sample. A generalization that emerges from these observations is that all college and university students in the United States share in one main system of beliefs about the higher-level occupational world. In addition, there is evidence to suggest that high school students who are bound for college, college faculty, and college graduates also participate in this same belief system.

To search for and highlight the consistency in a body of data is a most unusual experience in social science research. Traditionally, the focus of research is on the differences in the responses of two groups to a single stimulus or of one group to two stimuli. Differences are required to reject the null-hypothesis, to validate a theory, or as a diagnostic indicator in the investigation of beliefs and attitudes. The search for significant differences is a characteristic of the life of the researcher; not to find them is a source of frustration and discouragement. However, when consistency is found on a massive scale in a set of observations in which both common sense and accepted hypotheses lead to a prediction of considerable variability a reorientation of thinking and analysis is required. Departures from the consistent tendency in these data did occur and they are of considerable interest particularly when they are projected against a background of consistent results.

Factor Analysis of Thirty-Nine Groups (I)

It is easy to state that the images of occupations have great inter-group consistency, but it is far from easy to establish this as a statistical property of responses from large groups of subjects. The problem in this study is compounded by the fact that 39 independent sampling units[4] of subjects responded to comparable versions of the occupations questionnaire. Each sampling unit contained a range from as few as 50 to as many as 200 subjects. All subjects, except for the high school students, responded to 35 scales on each of 15 occupations providing 525 ratings. Clearly, the volume of data generated by this study had to be reduced to a small number of carefully developed values in order to be comprehended.

A brief comment about the sampling units is appropriate before describing the analytical procedures and results. All groups responded to standard forms of the occupations questionnaire. The groups represented a varied set of samples from the college related population. They were tested at different times, ranging from the eastern private men's liberal arts college A groups tested in the spring of 1958 to midwestern public university groups tested in spring 1963. The youngest groups consist in tenth grade high school students from the Detroit metropolitan area, and the oldest group is a sample of eastern private men's liberal arts college A faculty with an average age of approximately 45 years. Both the east and the midwest are represented by private college and public university groups. Students enrolled in several pre-professional undergraduate programs are represented as are students enrolled in liberal arts and sciences curricula. In general, a wide range of sampling units can be compared to test the degree of consistency in occupational images. These 39 sampling units are listed in Table 5 with the brief notation code that will be used in subsequent tables to identify each group.

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[4] Several of these sampling units are snythetic in that they contain two or more independent samples that have been pooled to serve other statistical or conceptual goals of the research.

Factor analysis was employed to obtain a measure of the consistency in group patterns of rating occupations. The factor anlaysis technique has the power to summarize a great quantity of data and extract its main trends. It is necessary to discard much detailed information to attain the desired economy of statement. In this case the sacrifice of information is essential to assure that basic trends can be isolated.

Seven scales were selected for this analysis from the 35 on which each occupation was rated. They represented the main dimensions of meaning identified in the questionnaire data in other analyses. The scales chosen for inclusion in the analysis were scales: 1J wealthy, 13J personal satisfaction, 23J optimistic, 34J personally effective, 260 cautious, 23C self-assertive, and 33C sociable. The mean scores of each group on each of the seven scales for all 15 occupations (105 means) were intercorrelated. These correlations formed a 39 x 39 matrix of intercorrelations in which the row and column entries were sampling units of subjects. Every correlation represented the association of 105 means from each of two groups which in turn were derived from hundreds of individual responses. The selection of seven scales was designed to simplify a formidable analysis. The matrix was factored and the factors were rotated by the quartimax method. Given the purpose of this analysis, to estimate the consistency of the data, the use of the quartimax rotation was justified by its tendency to distribute a large portion of the variance to the first factor. This analysis produced orthogonal factors representing the distribution in n-dimensional space of the groups of subjects. Inspection of the results indicated that orthogonal factors constituted an adequate description of the relationships. Oblique rotations were not explored although it is possible that they might have summarized the data more adequately.

Rotated factor loadings for all 39 groups on the first factor are presented in Table 6. The sum of squares of factor loadings on this factor was 34.066 out of a possible 39.0.

Table 5

THIRTY-NINE SAMPLING UNITS CONTAINED IN THE FACTOR ANALYSIS OF GROUPS

Sample Number	Sampling Unit	Brief Notation Code
1	East. Pvt. Men's Lib. Arts-A Fresh. '58[a]	EPrMLA-AFr58
2	East. Pvt. Men's Lib. Arts-A Sr. '58[a]	EPrMLA-ASr58
3	East. Pvt. Women's Lib. Arts Fresh.	EPrFLAFr
4	East. Pvt. Women's Lib. Arts Sr.	EPrFLASr
5	East. Pvt. Men's Lib. Arts-B Fresh.	EPrMLA-BFr
6	East. Pvt. Men's Lib. Arts-B Sr.	EPrMLA-BSr
7	East. Pub. Men Lib. Arts Fresh.	EPbMLAFr
8	East. Pub. Men Lib. Arts Sr.	EPbMLASr
9	East. Pub. Women Lib. Arts Fresh.	EPbFLAFr
10	East. Pub. Women Lib. Arts Sr.	EPbFLASr
11	West. Pvt. Men Lib. Arts Fresh.	WPrMLAFr
12	West. Pvt. Men Lib. Arts Sr.	WPrMLASr
13	West. Pvt. Women Lib. Arts Fresh.	WPrFLAFr
14	West. Pvt. Women Lib. Arts Sr.	WPrFLASr
15	West. Pub. Men Lib. Arts Fresh.	WPbMLAFr
16	West. Pub. Men Lib. Arts Sr.	WPbMLASr
17	West. Pub. Women Lib. Arts Fresh.	WPbFLAFr
18	West. Pub. Women Lib. Arts Sr.	WPbFLASr
19	West. Pub. Men Bus. Adm. Fresh.	WPbMBAFr
20	West. Pub. Men Bus. Adm. Sr.	WPbMBASr
21	West. Pub. Men Teach. Educ. Fresh.	WPbMTEFr
22	West. Pub. Men Teach. Educ. Sr.	WPbMTESr
23	West. Pub. Women Teach. Educ. Fresh.	WPbFTEFr
24	West. Pub. Women Teach. Educ. Sr.	WPbFTESr

[a] These groups were tested in spring 1958.

Table 5--Continued

Sample Number	Sampling Unit	Brief Notation Code
25	West. Pub. Men Engineer Fresh.	WPbMERFr
26	West. Pub. Men Engineer Sr.	WPbMERSr
27	High Schl. Men Coll. Bound Gr. 10	HSMCB10
28	High Schl. Men Non-Coll. Bound Gr. 10	HSMNCB10
29	High Schl. Men Coll. Bound Gr. 12	HSMCB12
30	High Schl. Men Non-Coll. Bound Gr. 12	HSMNCB12
31	High Schl. Women Coll. Bound Gr. 10	HSFCB10
32	High Schl. Women Non-Coll. Bound Gr. 10	HSFNCB10
33	High Schl. Women Coll. Bound Gr. 12	HSFCB12
34	High Schl. Women Non-Coll. Bound Gr. 12	HSFNCB12
35[e]	East. Pvt. Men's Lib. Arts-A Fresh. '62[b]	EPrMLA-AFr62
36[e]	East. Pvt. Men's Lib. Arts-A Sr. '62[c]	EPrMLA-ASr62
37[e]	East. Pvt. Men's Lib. Arts-A Fresh.'62 Drop-outs[d]	EPrMLA-AFr62DO
38	East. Pvt. Men's Lib. Arts-A Faculty	EPrMLA-AFac
39	West. Pub. Coed. Lib. Arts-B Special Sample[f]	WPbCLA-BSpec

[b] This group was tested in fall 1958.

[c] This group is made up of those students remaining in group #35 in spring 1962--a senior re-test.

[d] This group contains those students in group #35 tested in fall 1958 who subsequently dropped out of college.

[e] Groups numbered 35, 36, and 37 are not independent.

[f] A classroom sample drawn from another Midwestern public university.

Table 6

ROTATED FACTOR LOADINGS OF THIRTY-NINE SAMPLING UNITS ON THE FIRST FACTOR OF THE SEVEN-SCALE ANALYSIS

Rank Order	Sample No.	Sampling Unit Code	Factor Loading
1	16	WPbMLASr	.980
2	18	WPbFLASr	.978
3	8	EPbMLASr	.977
4	11	WPrMLAFr	.976
5	14	WPrFLASr	.975
6	7	EPbMLAFr	.974
7	6	EPrMLA-BSr	.973
8	10	EPbFLASr	.972
9	3	EPrFLAFr	.971
10	17	WPbFLAFr	.971
11	35	EPrMLA-AFr62	.971
12	23	WPbFTEFr	.970
13	4	EPrFLASr	.969
14	5	EPrMLA-BFr	.969
15	13	WPrFLAFr	.968
16	9	EPbFLAFr	.967
17	12	WPrMLASr	.967
18	15	WPbMLAFr	.966
19	1	EPrMLA-AFr58	.961
20	21	WPbMTEFr	.958
21	36	EPrMLA-ASr62	.957
22	2	EPrMLA-ASr58	.955
23	24	WPbFTESr	.954
24	25	WPbMERFr	.951
25	26	WPbMERSr	.949
26	37	EPrMLA-AFr62DO	.946
27	29	HSMCB12	.944
28	33	HSFCB12	.944
29	39	WPbCLA-BSpec	.939
30	22	WPbMTESr	.922
31	38	EPrMLA-AFac	.918
32	19	WPbMBAFr	.908
33	20	WPbMBASr	.893
34	31	HSFCB10	.893
35	27	HSMCB10	.881
36	34	HSFNCB12	.823
37	30	HSMNCB12	.812
38	32	HSFNCB10	.697
39	28	HSMNCB10	.640

Sum of Squares of Loadings = 34.066

The rotated factor loadings on the second factor are presented in Table 7. The sum of squares for this factor was 1.883. Six additional factors listed in Appendix B were extracted from the data and their total sum of squares equaled 1.471. The result of this analysis was the identification of a massive first factor which was adequate to describe the data. There was a single ordering of sampling unit responses to the occupations questionnaire that characterized all 39 groups of subjects.

Inspection of the first factor gives strong support to the statement that the data are consistent. Thirty-two of the groups had factor loadings above .90 on the main factor, and the median loading for all groups on the first factor was .958. This median value expresses a degree of association that is rarely found in survey data. The patterning of group factor loadings on the first factor is also quite revealing. Even though the range of loading values was very restricted, a clear patterning of groups was discernible. The 11 highest loadings were associated with undergraduate liberal arts groups. There is a general view of the occupational world that was characteristic of all college groups, and was held consistently by identifiable sub-clusters of groups within the population. The pairs of pre-professional engineering and business administration sampling units were clustered together as a function of their loadings in spite of the small range of scores; each member of the pairs of both pre-professional samples related in an almost identical way to the main factor. In the lower range of factor loadings the high school student groups were the most variant from the standard collegiate pattern with the noncollege bound groups at the extreme position. The ordering of the quantitative values of samples in this case also attested to the stability of the data.

A much smaller bi-polar factor is described in Table 7. In this attenuated factor also a consistent patterning of sampling units was found. The positive pole of the factor contained primarily private college men's groups followed by other private college samples. At the opposite end of the factor was a consistent array of high school groups. Although this factor appears similar in group patterning to the first factor, it should be noted that private college groups anchored the positive end of the factor and liberal arts groups were distributed more widely through the factor. There was a small but detectable pattern of responses to the questionnaire that distinguished private college students and noncollege bound high school students. The other six factors displayed similar intelligible group patterning, but their magnitude does not justify lengthy discussion.

Table 7

ROTATED FACTOR LOADINGS OF THIRTY-NINE SAMPLING UNITS ON THE SECOND FACTOR OF THE SEVEN-SCALE ANALYSIS

Rank Order	Sample No.	Sampling Unit Code	Factor Loading
1	37	EPrMLA-AFr62DO	.157
2	2	EPrMLA-ASr58	.141
3	5	EPrMLA-BFr	.125
4	1	EPrMLA-AFr58	.113
5	4	EPrFLASr	.108
6	35	EPrMLA-AFr62	.100
7	39	WPbCLA-BSpec	.099
8	38	EPrMLA-AFac	.094
9	6	EPrMLA-BSr	.092
10	10	EPbFLASr	.085
11	13	WPrFLAFr	.074
12	12	WPrMLASr	.071
13	22	WPbMTESr	.060
14	11	WPrMLAFr	.059
15	3	EPrFLAFr	.058
16	18	WPbFLASr	.052
17	14	WPrFLASr	.051
18	8	EPbMLASr	.042
19	36	EPrMLA-ASr62	.039
20	9	EPbFLAFr	.034
21	20	WPbMBASr	.014
22	24	WPbFTESr	.009
23	17	WPbFLAFr	.006
24	16	WPbMLASr	.005
25	15	WPbMLAFr	-.001
26	26	WPbMERSr	-.004
27	7	EPbMLAFr	-.006
28	23	WPbFTEFr	-.021
29	19	WPbMBAFr	-.036
30	21	WPbMTEFr	-.043
31	25	WPbMERFr	-.055
32	33	HSFCB12	-.152
33	29	HSMCB12	-.245
34	31	HSFCB10	-.352
35	27	HSMCB10	-.418
36	30	HSMNCB12	-.449
37	34	HSFNCB12	-.493
38	32	HSFNCB10	-.645
39	28	HSMNCB10	-.689

Sum of Squares of Loadings = 1.883

This factor analysis of group responses to the basic research instrument demonstrates that there is one principle ordering of samples that describes the views of all groups about occupations. Deviations from this single ordering of groups were small and consistent attesting to the adequacy of the dimension for describing the view of the occupational world held by college people. The groups that did not share fully in this main factor were high school student groups, and among them the noncollege bound groups were the only ones that had relatively low loadings. The small secondary factors describing group responses organized themselves in quite intelligible patterns, but they represented only a minor fraction of the variance. These factors underline the consistency of the data, but they cannot attract attention away from the power and weight of the single main factor.

Factor Analysis of Thirty-Nine Groups (II)

Thus far the discussion has not dealt directly with the image of any occupation as a distinct unit. Rather the responses to all occupations on a series of scales by a group of subjects have been compared with the responses of other sampling units. This technique tells a great deal about the response properties of the groups, but it conceals the content of these responses. A second set of factor analysis studies was conducted using separately each of the seven scales that were included in the group analysis described in the preceding section. In these analyses the mean scores of each of the 39 groups on one scale only for 15 occupations were intercorrelated. For example, the mean scores of the eastern public university male liberal arts seniors on cautious--rash for the 15 occupations were correlated with the same set of means for each of the other 38 groups. This produced a 39 x 39 matrix of intercorrelations in which groups of subjects were row and column entries.

To illustrate this technique and its implications the factor analyses of two scales will be reported. The first scale is wealthy--not well-to-do, a scale that requires the evaluation of objective properties of an occupation and leads to a high expectation of consistency of group responses. The ability of population samples to rate or rank-order occupational groups in terms of their social status is well established. There is every reason to believe that the rating of occupations in terms of their relative income level is equivalent to the social status ratings. Therefore, it is reasonable to expect that on an objective feature of occupations such as relative affluence, the participants in the several sampling units would be in substantial agreement.

The factor analysis for this scale and six additional scales was executed in the same manner as the analysis described in the preceding section. A quartimax rotation was used and orthogonal factors are reported in all cases. The factor loadings of the 39 groups on the first factor employing the wealthy--not well-to-do scale are listed in Table 8. The median loading of all groups was .984 and the sum of squares of loadings for the first factor was 37.220 out of a possible 39. There was clearly one quantitative set of average positions of occupations on the wealthy scale that was shared by all groups. Even the noncollege bound tenth grade high school groups were in basic agreement with the collegiate estimation of the relative wealth of 15 occupations. A second bi-polar factor with a sum of squares of .808 arranged the private men's college groups at the positive pole (maximum loading = .210) and all eight high school groups at the negative end (maximum loading = -.421).

A second scale that was analyzed separately, optimistic--pessimistic, seemed to have a small probability of revealing a high degree of consistency of usage between all groups of respondents. Rating degree of optimism associated with participants in a high-level occupation is basically a subjective judgment. This is a behavioral characteristic that varies widely from person to person, and it would not be surprising if different groups assigned different relative ratings to occupations on this scale. In Table 9 the factor loadings are presented for the first factor on the optimism scale. The sum of squares of these loadings attained the high value of 31.177 out of a possible 39.0 and the median loading was .928. Even on this personality attribute there was a basic general factor that can be said to characterize all sampling units with the exception of the noncollege bound high school groups. This latter group shared in some elements of the college response system, but it also had distinctive and internally consistent ways of using this scale. A second bi-polar factor with a sum of squares of 1.647 arranged college seniors at one end (maximum loading = +.399) and college freshman and high school student groups at the other pole (maximum loading = -.790). A third factor with a sum of squares of 1.397 is represented by the factor loadings in Table 10. This factor illustrates a male-female dimension in rating the optimism scale that points to the stable characteristics of group responses even when a very small part of the variance is available to position the groups. It would not have been surprising if second order factors had led to an unintelligible arrangement of sampling units. In fact, even factors with very low sum of squares values produced interesting and meaningful quantitative arrangements of the groups.

Table 8

ROTATED FACTOR LOADINGS OF THIRTY-NINE SAMPLING UNITS ON THE FIRST FACTOR OF THE "WEALTHY" SCALE ANALYSIS

Rank Order	Sample No.	Sampling Unit Code	Factor Loading
1	25	WPbMERFr	.996
2	36	EPrMLA-ASr62	.995
3	8	EPbMLASr	.993
4	7	EPbMLAFr	.992
5	11	WPrMLAFr	.992
6	16	WPbMLASr	.992
7	18	WPbFLASr	.992
8	29	HSMCB12	.992
9	14	WPrFLASr	.991
10	15	WPbMLAFr	.991
11	9	EPbFLAFr	.990
12	39	WPbCLA-BSpec	.990
13	12	WPrMLASr	.989
14	10	EPbFLASr	.987
15	24	WPbFTESr	.986
16	13	WPrFLAFr	.985
17	21	WPbMTEFr	.985
18	26	WPbMERSr	.985
19	35	WPrMLA-AFr62	.985
20	17	WPbFLAFr	.984
21	1	EPrMLA-AFr58	.983
22	22	WPbMTESr	.982
23	3	EPrFLAFr	.980
24	4	EPrFLASr	.978
25	33	HSFCB12	.978
26	5	EPrMLA-BFr	.977
27	6	EPrMLA-BSr	.977
28	23	WPbFTEFr	.977
29	2	EPrMLA-ASr58	.975
30	37	EPrMLA-AFr62DO	.973
31	20	WPbMBASr	.972
32	34	HSFNCB12	.970
33	31	HSFCB10	.964
34	19	WPbMBAFr	.962
35	27	HSMCB10	.959
36	30	HSMNCB12	.959
37	38	EPrMLA-AFac	.953
38	28	HSMNCB10	.889
39	32	HSFNCB10	.880

Sum of Squares of Loadings = 37.220

Table 9

ROTATED FACTOR LOADINGS OF THIRTY-NINE SAMPLING UNITS ON THE FIRST FACTOR OF THE "OPTIMISTIC" SCALE ANALYSIS

Rank Order	Sample No.	Sampling Unit Code	Factor Loading
1	15	WPbMLAFr	.970
2	5	EPrMLA-BFr	.969
3	4	EPrFLASr	.964
4	18	WPbFLASr	.963
5	17	WPbFLAFr	.962
6	11	WPrMLAFr	.960
7	16	WPbMLASr	.960
8	10	EPbFLASr	.959
9	8	EPbMLASr	.958
10	24	WPbFTESr	.951
11	23	WPbFTEFr	.951
12	1	EPrMLA-AFr58	.949
13	3	EPrFLAFr	.949
14	2	EPrMLA-ASr58	.943
15	6	EPrMLA-BSr	.942
16	12	WPrMLASr	.937
17	21	WPbMTEFr	.933
18	25	WPbMERFr	.930
19	9	EPbFLAFr	.930
20	13	WPrFLAFr	.928
21	36	EPrMLA-ASr62	.928
22	33	HSFCB12	.927
23	35	EPrMLA-AFr62	.926
24	29	HSMCB12	.924
25	14	WPrFLASr	.918
26	37	EPrMLA-AFr62DO	.915
27	22	WPbMTESr	.913
28	7	EPbMLAFr	.906
29	26	WPbMERSr	.885
30	19	WPbMBAFr	.830
31	31	HSFCB10	.809
32	39	WPbCLA-BSpec	.808
33	27	HSMCB10	.797
34	20	WPbMBASr	.795
35	34	HSFNCB12	.771
36	32	HSFNCB10	.770
37	38	EPrMLA-AFac	.744
38	30	HSMNCB12	.585
39	28	HSMNCB10	.424

Sum of Squares of Loadings = 31.177

Table 10

ROTATED FACTOR LOADINGS OF THIRTY-NINE SAMPLING UNITS ON THE THIRD FACTOR OF THE "OPTIMISTIC" SCALE ANALYSIS

Rank Order	Sample No.	Sampling Unit Code	Factor Loading
1	38	EPrMLA-AFac	.420
2	20	WPbMBASr	.352
3	26	WPbMERSr	.198
4	6	EPrMLA-BSr	.164
5	1	EPrMLA-AFr58	.141
6	2	EPrMLA-ASr58	.134
7	8	EPbMLASr	.130
8	4	EPrFLASr	.124
9	39	WPbCLA-BSpec	.112
10	16	WPbMLASr	.107
11	19	WPbMBAFr	.104
12	15	WPbMLAFr	.101
13	21	WPbMTEFr	.091
14	11	WPrMLAFr	.090
15	12	WPrMLASr	.090
16	25	WPbMERFr	.072
17	36	EPrMLA-ASr62	.069
18	37	EPrMLA-AFr62DO	.067
19	22	WPbMTESr	.056
20	5	EPrMLA-BFr	.033
21	24	WPbFTESr	.005
22	29	HSMCB12	-.024
23	18	WPbFLASr	-.030
24	30	HSMNCB12	-.056
25	3	EPrFLAFr	-.063
26	23	WPbFTEFr	-.064
27	35	EPrMLA-AFr62	-.094
28	33	HSFCB12	-.106
29	28	HSMNCB10	-.113
30	13	WPrFLAFr	-.140
31	10	EPbFLASr	-.140
32	7	EPbMLAFr	-.142
33	27	HSMCB10	-.151
34	17	WPbFLAFr	-.163
35	14	WPrFLASr	-.163
36	9	EPbFLAFr	-.246
37	34	HSFNCB12	-.296
38	31	HSFCB10	-.460
39	32	HSFNCB10	-.571

Sum of Squares of Loadings = 1.397

Factor analyses were executed for each of seven scales on the occupation means for 39 groups of respondents. The seven rating scales were selected as a representative sample of all 48 scales included in the study. In addition to "wealthy" and "optimistic," "personal satisfaction," "personally effective"; "cautious," "self-assertive," and "sociable" were each analyzed separately. The results of the analyses indicated that all groups loaded primarily on one unipolar factor for each scale taken singly. That is, there is high agreement on every scale among all groups of respondents rating occupations. When groups of subjects rate high-level occupations in terms of their impressions of the people in the occupations they do so in a very consistent fashion.

Factor Analysis of Thirty-Nine Groups (III)

One scale in the entire set of 48 required a different kind of judgment from members of the groups. Will all groups agree when the members are required to rate occupations in terms of their own or other peoples desires to enter them if they were ideally free to do so? College women were asked to estimate the ideal preference of college men for the 15 occupations. High school women were asked to express their own ideal occupational preferences. The like-to-be scale required that men report a personal reaction about themselves. The other 47 scales required that respondents give their personal impressions about the characteristics of the occupations. The like-to-be scale demanded a statement of one's own choices or a prediction of the preferences of others. It was a personal preference scale whereas the standard set of scales were apparently impersonal in that they did not involve the respondent or men in a personal sense. The now familiar factor analysis of means of occupations on the like-to-be scale for the 39 groups was executed. The results revealed that this scale elicited two distinctive patterns of reactions from the sampling units. Two main factors were identified indicating that there were two important patterns of group response to this scale. Tables 11 and 12 present the first and second principle factors that have sum of squares values of 19.499 and 12.684 respectively. The first factor was defined by private liberal arts men's college groups and more generally by the responses of male groups to the like-to-be scale. The second factor was anchored by a like-to-be response pattern that was attributed to men by women's groups and held by groups of high school men. The two factors of group responses produced by the like-to-be scale underscore the consistency of the results on the other scales. When college people regardless of their location in the academic spectrum rated occunegative shifts included wise, interesting, colorful, individualism, intelligent, valuable, great personal satisfaction, deep, has good taste, and personally effective. A less important pattern of changes were centered on the sociable dimension and included attentive to people, optimistic, active, socially popular and self-assertive. No other dimension displayed large negative changes. Both of the factors were clearly evident in the negative changes recorded from freshman to sophomore testing. No factor pattern can be identified in the changes recorded between the sophomore and senior years. The strong intellectual status of the lawyer was attacked during the early part of the college experience. The sociable features of the lawyers also were given lower scores by sophomores.

School Teacher: This is a second occupation which experienced a rather consistent trend of negative changes from freshman to sophomore, and from sophomore to senior years. Cultured intellect contributed a major amount to the large decline of average scale values for the school teacher. Sociability scales declined to a moderate degree and in a consistent pattern. Finally, the scales associated with personal confidence, confident, strong, realistic about life, and responsible among others, were lowered in scale values a relatively small amount. Unlike the findings with the previously described occupations, these changes were discernible only in the comparison of sophomore and senior students. During the passage of their college years, the undergraduates were hard on the image of the school teacher. His most attractive attributes were sharply reduced in values, leaving unchanged only the factors on which his standing was not very favorable to begin.

Artist: This is the one representative of the relatively stable images that will be described. In this case a clear rearrangement of views occurred in a four-year time span. On two dimensions the artist shifted in the positive direction in scale values. The artist was perceived as growing more sociable in the freshman-senior comparison as represented by more favorable scores on attentive to people, socially popular, and sociable. The artist also gained in material and social success on such scales as high social status and personally effective. It might better be emphasized that the artist became less unsociable and less unsuccessful. The artist image changed in the standard pessimism direction on strength and confidence. The relevant scales were persevering, confident, strong, and self-assertive. This negative shift appeared mainly in the sophomore to senior period, while the positive shifts were clearest in the early years of college. It is intriguing to find that the artist was the only occupation with an improving image during college for these private liberal arts college students. This observation has some interesting implications for interpreting the meaning of a liberal arts education.

Inspection of the scales that showed marked changes toward the negative or less desirable pole in the senior year compared with the freshman year reveals a clear pattern of changes. Table 30 presents the average differences between senior and freshman values over the 15 occupations for the scales that changed the most. This is a way of observing how the items are used by students without reference to a particular occupation. It is clear that seniors gave much lower scores on average on the cultured intellect scales. Nine of the first ten scales in degree of negative change have high loadings on cultured intellect. There was a secondary trend of lowering components of strong confidence. It is instructive to note that the other factors were not involved to a marked degree in the senior pessimism shift. A separate study of the freshman-sophomore and sophomore-senior changes can be made from the data in Table 31. It is quite apparent that the cultured intellect changes occurred largely in the first two years. The strong confidence decline and a shift in success occurred in the sophomore-senior period. The latter variation was not sufficiently dramatic to show in the freshman to senior comparison.

This analysis of the behavior of scales across occupations indicates that the effect of early experiences in one particular college led to a serious questioning of the intellectual and cultural status of many high-level occupations. It is possible that contact with an entirely new level of intellectual and cultural sophistication in college revealed to students a new meaning for this dimension. They may have come to realize that their earlier attribution of a high intellectual status to school teachers, doctors, and lawyers, among others, failed to take into account another level of intellectual activity they did not then suspect. This is suggested by the finding that the anchor occupation on cultured intellect, college professor, did not lose status in this dimension nor did the artist whose cultural strength is very great. This new definition of intellectualism includes an intensive concern with ideas, a drive to be cognizant of the best and latest writing and thinking on intellectual topics, and an emphasis upon original analysis. In the artistic realm the higher sophistication involves electronic and medieval music, the latest New York trends in painting and sculpture, and a commitment to experimental theater. In general, an alertness to both trends and fads in ideas and the arts defines the higher intellectual who represents a new world of interests to many a freshman. This experience may establish a new meaning for cultured intellect that accounts for a rearrangement of the ordering of occupations.

Table 30

LONGITUDINAL STUDY
AVERAGE DIFFERENCES BETWEEN FRESHMAN AND SENIOR SCALE VALUES OVER 15 OCCUPATIONS (N = 167)

Scale	Average Difference[a]
has good taste	-.60
intelligent	-.54
wise	-.53
thoughtful	-.52
responsible	-.52
interesting	-.50
colorful	-.49
deep	-.49
valuable	-.48
successful	-.47
optimistic	-.46
persevering	-.45
unselfish	-.45
personally effective	-.43
confident	-.42
Average Difference over 48 Scales	-.30

[a] Negative values indicate that senior scale averages are away from the end of the scale listed on the left.

Table 31

LONGITUDINAL STUDY
AVERAGE DIFFERENCES BETWEEN FRESHMAN AND SOPHOMORE AND SOPHOMORE AND SENIOR SCALE VALUES OVER 15 OCCUPATIONS
(N = 48)

Freshman and Sophomore		Sophomore and Senior	
Scale	Average Difference[a]	Scale	Average Difference[a]
good taste	-.49	responsible	-.28
wise	-.41	confident	-.26
thoughtful	-.40	self-sufficient	-.24
valuable	-.37	successful	-.23
unselfish	-.34	powerful in public affairs	-.20
deep	-.34	colorful	-.20
optimistic	-.31	wise	-.20
interesting	-.30	socially popular	-.20
Mean Difference over 48 scales	-.16	Mean Difference over 48 scales	-.09

[a] Negative values indicate that the scale averages of the older of the two groups are away from the end of the scale listed.

The sophomore to senior tendency to give lower scores on personal confidence may reflect a growing awareness of students about the lack of security that characterizes many adults. The students showed a pattern of reducing the strength and confidence of some highly regarded occupations such as doctor, school teacher and artist. Perhaps some of the ideal qualities of strength, perseverance and realism that were originally associated with these fields looked less plausible as a student approached peer status with adult professionals. This seems less a feature attributable to a college education than the effect of maturity and proximity to a career.

Changes in Ideal Occupation Preferences

Do the ideal preferences reflected in responses to the like-to-be scale change in the course of college? Table 32 presents the average freshman and senior preferences for all subjects and the like-to-be scores at three points in time for the sophomore retest subjects. Inspection of the left-hand columns indicates that the rank-ordering of ideal preferences was maintained almost intact over the four years. The single exception was the occupation "artist," which shifted dramatically from ninth rank for freshmen to the second place for seniors. This change is consistent with the earlier evidence on the relative stability of the image of the artist in the face of senior pessimism. The artist apparently changed from a relatively unattractive, or threatening, occupational alternative and way-of-life to a glamorous, exciting, ideal option for many of these liberal arts students. The opportunity of the artist to be free, unconventional and able to express his inner life acquires great positive valence for these liberal arts upperclassmen. Many of them foresee that in the business and professional world for which they are bound they will have to manage their impulses and control emotions. The artist is free of this constraint which is oppressive to some contemporary students.

The sophomore retest data on like-to-be is included to demonstrate the progressive nature of like-to-be changes for the college students. The artist grew steadily more appealing during the four-year period. Personnel director and scientist gradually shifted to lower scores. Business executive, doctor, engineer, office supervisor, retail store manager, and sales manager dropped in attractiveness during the first two years; lawyer and school teacher changed to lower like-to-be values primarily after the

Table 32

IDEAL OCCUPATION PREFERENCE SCORES (LIKE-TO-BE) FOR ALL SUBJECTS AND SOPHOMORE RETEST SUB-GROUPS

AVERAGE LIKE-TO-BE SCORES

	All Subjects Who Graduated				Sophomore Retest Group		
Occupation	Fresh., All Subjects (N = 167)	Rank Order	Srs., All Subjects (N = 167)	Rank Order	Fresh. Test (N = 48)	Soph. Retest (N = 48)	Senior Retest (N = 48)
Accountant	5.64[a]	15	5.93	15	5.50	5.75	5.64
Artist	4.24	9	3.02	2	4.18	3.54	3.10
Business Executive	3.15	5	3.41	5	2.93	3.52	3.70
College Professor	2.32	1	2.62	1	2.29	2.43	2.37
Doctor	2.95	4	3.19	4	3.14	3.35	3.43
Engineer	3.43	7	4.36	8	3.68	4.41	4.37
Industrial Manager	4.34	10	4.71	11	4.58	4.79	4.70
Lawyer	2.68	2	3.05	3	2.66	2.81	3.47
Office Supervisor	5.13	12	5.64	13	5.35	5.70	5.60
Personnel Director	4.13	8	4.61	10	4.33	4.54	4.87
Retail Store Manager	5.43	14	5.80	14	5.54	5.81	6.00
Sales Manager	5.27	13	5.44	12	5.22	5.50	5.58
School Teacher	3.22	6	3.90	7	3.22	3.31	3.75
Scientist	2.78	3	3.67	6	2.85	3.25	3.68
Social Worker	4.51	11	4.59	9	4.91	4.72	4.77

[a] The highest average like-to-be score possible is 1.00, and 7.00 is the extreme would not like-to-be score.

sophomore year. This pattern of preference score changes is not the same as the image shifts discussed earlier in this chapter. These data indicate again that differential changes occurred among the occupations with a trend toward a concentration of changes early in the college years.

The Impact of College on Response Variability

Social scientists have invested considerable time and effort attempting to assess the effects of attending four years of college. One of the measures they have used to assess the influence of higher education is the differential degree of agreement in value areas among freshmen and upperclass students. For example, they ask whether the political views of seniors are more or less varied than those of freshmen? If, for example, seniors give evidence of greater homogeneity of view, it is taken to mean that the college experience gives rise to a greater consensus within the student body. Most of these studies have had to rely on the comparison of cross-sectional samples of freshmen and seniors tested at one point in time. This procedure has some basic logical flaws. A rarely noted limitation is that if a greater consensus is discovered among the seniors, it may be the result of four years of college, or it may result from the selective attrition of students with disparate views. The cross-sectional design cannot, ordinarily, disentangle the two interpretations. The data obtained in the longitudinal study permitted a penetrating analysis of this issue by comparing test results of seniors with their own test responses as freshmen. In this way the effect of selective drop-outs is controlled since all drop-outs are excluded from the comparison.

A variance was computed on the mean of every scale for each occupation on the freshman testing, and the analogous variance was computed for the senior retesting of these freshmen. The freshman and senior scale variances were then compared for each occupation and the larger was noted. If senior variances are found to be consistently smaller than freshman variances, then there is evidence that greater agreement exists among students on the responses to occupations in the senior year. Table 33 summarizes the relative magnitude of variances by occupations indicating that the senior testing revealed the greater agreement of responses. The table suggests that the highest level of senior homogeneity of responses was attained in rating the business-related occupations. There appeared to be less senior convergence

Table 33

LONGITUDINAL STUDY
COMPARATIVE VARIANCES OF MEANS OF SCALES BY OCCUPATIONS FOR FRESHMAN AND SENIOR TEST-RETEST

Occupation	No. of Scales with Higher Freshman Variance	No. of Scales with Higher Senior Variance	Level of Significance of Difference (P <)
Accountant	42	6	.01
Artist	37	11	.01
Business Executive	37	11	.01
College Professor	30	18	n.s.
Doctor	27	21	n.s.
Engineer	36	12	.01
Industrial Manager	39	9	.01
Lawyer	34	14	.01
Office Supervisor	40	8	.01
Personnel Director	30	18	n.s.
Retail Store Manager	41	7	.01
Sales Manager	39	9	.01
School Teacher	30	18	n.s.
Scientist	37	11	.01
Social Worker	38	10	.01

There is a reasonable amount of evidence to indicate that the drop-outs were different from those students who remained in college for four years. In a subtle way the drop-outs appeared to be more sophisticated than their more persistent colleagues. For example, as freshmen the drop-outs assigned slightly lower scores to the occupations over all scales than the future graduates. Second, the drop-outs tended to give lower scores on the cultured intellect scales than the future seniors. These two trends suggest the drop-outs tended to be a little more like seniors than the non-drop-outs. On several occupations, including engineer and lawyer, the future drop-outs developed a profile of scores that departed from that of freshmen who would remain in a direction consistent with the profiles produced by the graduating seniors. It should also be noted that the like-to-be scores for stay-in and drop-out freshmen were identical. Finally, there is evidence that the drop-outs as freshmen had a greater variance in their scale values, grouped by occupations, than the more persistent students. This indicates that the drop-outs held a greater range of views about occupations than those who remained. These several indicators point to the likelihood that the drop-outs as freshmen compared with the successful degree candidates as freshmen tended to be more like seniors in their occupation evaluation patterns. The greater variance of responses that the future drop-outs demonstrated suggests that they were in less agreement about occupations as freshmen than the students heading straight for a degree. The drop-outs were a relatively heterogeneous group in terms of their views about occupations and they might have influenced the tendency toward senior homogeneity of images had they remained in college.

Summary

A longitudinal study was undertaken of the images of occupations held by male undergraduate students in one private liberal arts college. The purpose of the study was to ascertain whether college attendance is associated with a systematic change in occupational images. If changes are found, what shape do they take and what is their significance?

The basic finding is that consistency in the images of occupations was demonstrated over the four years of college. College brought about small but interesting changes in the images. First, there was a general shift of responses to the negative pole of scales, which has been labeled senior pessimism.

Second, the effect of senior pessimism did not fall equally on all occupations, nor did it represent equally all factor groupings. Analysis of the fine structure of the data showed that some occupational images were altered primarily in the first two years of college; others were shifted mainly in the last two years, and still others changed in a smooth, uninflected manner. It was found that the decline in favorable ratings was heavily concentrated in the cultured intellect grouping of scales and the strength and confidence scales showed a less dramatic change. A comparison of the like-to-be patterns for freshmen and seniors revealed the meteoric rise of the artist to a place in ideal favor, second only to the college professor. An important by-product of the study was the discovery of strong evidence that college led to a greater homogeneity in the perception of occupations among these students. This is a consequence of a liberal arts college education that deserves careful study. Finally, the data indicated that as freshmen students who did not graduate were more sophisticated in their perception of occupations than the graduates were as freshmen.

Chapter VII

OCCUPATIONAL IMAGES HELD BY PRE-PROFESSIONAL STUDENTS

Liberal Arts and Pre-professional Populations

The occupations Project was focussed entirely upon undergraduate liberal arts student groups in its early phases. This was a deliberate choice of emphasis designed to shed light on the views of the occupational world held by students free to choose among a range of post-college options. In career selection, the liberal arts and sciences students retain their freedom to move in a variety of directions. Admittedly, the undergraduate history major is not likely to seek a graduate career in science, but he may choose to enter business, law, medicine, teaching at several levels, among a series of alternatives.

Another reason for focussing on the liberal arts students is that they are least likely to have a particularly strong commitment to one occupation in the list. Therefore, it is believed that the most unbiased available college picture of the occupation profiles will be produced by this group. Obviously, pre-medical students or future scientists will tend to have special views of their intended fields, but this is balanced or averaged-in by dealing with liberal arts students as a group. From an instructional point of view, such professionally oriented students are grouped with many others of different occupational persuasions in a liberal arts program.

A third general reason for testing liberal arts students is related to the first two. The liberal arts students provide a base-line of response scores against which to measure other groups. Small colleges are often exclusively devoted to the liberal arts, and if the study is to have wide relevance it must be meaningful to the smaller institutions. All large universities also have liberal arts programs, therefore the focus on liberal arts is relevant to the large institutions. Liberal arts students represent the only meaningful population comparisons between the two general types of higher educational institution. It is also possible to compare high school students in a college preparatory track with liberal arts undergraduates.

The question has been raised continually since the research began about the applicability of these findings to college students with clear professional aims. It has been suggested repeatedly that students in large universities enrolled in separate professional schools might have a different outlook on the occupational world. Surely, it has been argued, the pre-professional students in a university would have a rosy conception of the professions for which they are preparing.

The occupations questionnaire was administered to a probability sample of the pre-professional freshman and senior men enrolled in the Schools of Business Administration, Engineering, and Education of the midwestern public university. In addition, a probability sample was drawn of freshman and senior women in the School of Education. The method of distributing and collecting the questionnaires was by paid undergraduate student agents as described in Chapter I. Each male agent was given a randomized list to contact consisting of male students drawn from all the pre-professional groups. One woman agent was responsible for contacting all of the women in the pre-professional sample. The data in Table 34 summarizes the characteristics of the sample and the response rate that was attained.

Table 34

NUMBER AND PERCENTAGES OF COMPLETED QUESTIONNAIRES BY PRE-PROFESSIONAL GROUPS AND CLASS LEVEL

Class	Business Administration	Engineering	Education	
			Men	Women
	N	N	N	N
Senior	43	47	34[a]	26[a]
Freshman	46	53	52	55
Total	89	100	86	81
% Completed	85%	95%	82%	77%

[a] The numbers are low in these categories because of the insuperable difficulty of contacting student teachers involved in practice teaching.

The general response level was satisfactory. The relatively small numbers of senior education majors was regrettable but unavoidable given the pattern of full-time teaching internships at this university. As far as could be determined, the sampling procedure and the response patterns did not introduce any bias into the results.

Business Administration Students

The Business Administration majors have an opportunity in the occupations questionnaire to respond to a number of fields closely related to their undergraduate area of specialization. They should know much more about the business related occupations than the liberal arts students, and they should have information that would encourage them to make more differentiated responses. Given their special training and somewhat separate academic social setting, it is possible that business students compared with liberal arts students would respond differently to the entire spectrum of occupations. There is good reason as noted in Chapter III to believe that both business administration and engineering students differ from liberal arts students in the way they organize their perceptions of occupations.

The responses of the business students and those of a sample of 232 male freshman and senior liberal arts majors in the same midwestern public university were compared on all 15 occupations. This is an interesting comparison in view of the recent speculation about the poor conception of business careers that is held by liberal arts college students throughout the nation. A number of observers have recently awakened to the fact that college students are repelled by many aspects of the business world. The data from the Occupations Project have shown that college students have had a critical view of the business fields for at least a decade. However, it has only been in the past two or three years that business has been faced with a seller's market on the part of good college talent. This has happened at exactly the moment in history when major industries have "discovered" the potential value to them of capable graduates. This turn of events has made manifest a long latent problem in the image of business as a career. The comparisons described in this particular chapter permit an exploration of the possibility that students who select a business curriculum have a different orientation than liberal arts students. Is the poor standing of the business fields in the evaluations of liberal arts students resisted by the business majors?

First, on seven occupations the business majors held images that did not differ from those held by liberal arts men. Doctor, engineer, lawyer, school teacher, scientist, social worker, and personnel director, all projected the same images to these two distinct populations of students. The mean scale scores of the two groups differed on fewer than seven scales[15] and the correlations of the seven profiles of means ranged from +.91 to +.96. It should be noted that one business related occupation, personnel director, was included in this group. In general, it appears that business majors shared with liberal arts students the images of a group of important professions.

Two occupations, artist and college professor, were perceived somewhat differently by the business and liberal arts students as indicated by significant differences on seven scales in the two instances. The business students' view of the artist correlated +.96 with that of liberal arts students, but tended to be slightly more negative. The business group perceived the artist as being both less intellectual and strong and confident. In the case of college professor, the correlation between the two groups of +.89 indicated somewhat less general agreement. The business students perceived the professor as more conservative and more sociable than did their liberal arts colleagues. At the same time, the business students rated the professor as less intellectual and lower in personal control. These observations on the college professor raise the possibility that there may be grounds for these small differences in images in the experience of the two groups. Could it be that business administration faculty differ sufficiently from liberal arts faculty to give rise to these results?

Six business related occupations have not yet been accounted for. In every one of these cases the difference in profiles of scale scores between business and liberal arts students were large and significant. However, the patterns of scale means did not differ greatly. The correlations of scale means between groups for the occupations ranged from +.86 for accountant to +.91 for both industrial manager and retail store manager. This indicates that business students attributed to business related fields the same internal structure of characteristics as did liberal arts students. On the other hand business students assigned business fields a very different level of scale values in keeping with different perceptions of the occupations. On three of the business occupations, business executive, accountant, and sales manager, the business students held a much more positive view. The business executive was converted from a "good guy" into a "great guy." He emerged as a broad-gauged, all encompassing servant of the people. His intellectual status was raised to a very high level, and he was accorded a very high level of strength and confidence. He was also perceived as more sociable by the business students in comparison with liberal arts students. These are dimensions on which the executive stood quite high with liberal arts students. Thus the business students appeared to be highlighting the strengths of the executive. They did not shift him to ridiculous heights, however. For example, he was not seen as more intelligent than the college professor or more attentive to people than the doctor. The business students specified that the executive is less conservative than the liberal arts people would have him.

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[15] In comparisons of two independent groups on one occupation at least seven pairs of means must be different at the .05 level to reject the hypothesis that the two profiles of occupation means are drawn from the same population of means.

In the case of the accountant the business majors were forced to repair a faltering image. Conservatism and personal control, pronounced features of the liberal arts student image of the accountant, also were viewed as central features by the business students. However, on intellect and strong and confident the accountant was believed to be much better equipped by business majors. His standing on material and social success and sociability was also improved significantly in the ratings of the business majors. The business students perceived the accountant as a decent, hard-working, moderately sophisticated and socially respected person. His image remained calm, cautious, and dour, but it was endowed with energy, talent, strength and a dedication to service.

The sales manager was also salvaged on the intellect factor by the business majors. As with the other business occupations, the artistic element of cultured intellect was not emphasized by business students. The already high sociability of the sales manager was heightened further, and his rating on material and social status was raised to a moderate degree. The sales manager was regarded by the business students as a bright and lively individual with a high capacity for relating to people. Some of the flaws in the image that were apparent in the ratings of liberal arts students were not perceived to such a marked degree by future businessmen.

Both office supervisor and retail store manager were given much higher scores on the intelligence dimension by the business students. This is a factor on which liberal arts students held these occupations in low regard. On the other dimensions the two groups were in agreement, except for the fact that business students accorded the office supervisor a less pretty wife than did the liberal arts contingent. The industrial manager was assigned by business students compared with liberal arts students greater intellectual status and strength and confidence. The latter characteristics included hard, strong, active, and realistic about life, features that were already clearly recognized as outstanding in this occupation by liberal arts students.

Inspection of the use patterns of individual scales by the business administration majors compared with liberal arts men indicated that three scales, intelligent, active, and unselfish, showed significant differences in favor of the business occupations. These scales defined crucial perceived limitations of the business occupations for liberal arts students. The business students perceived all business occupations as involving much more intelligence, activity, and less selfishness than did the liberal arts students. The business students have adjusted the images to share more fully in the set of values that are prized by liberal arts college students. An interesting indicator of this shift is the observation that the business students compared to liberal arts students tended to hold weaker images of the intellectual and service-oriented occupations, school teacher, social worker, college professor and artist. In a sense each student group heightened the desirable features of the occupations it valued most highly.

In general, business students in comparison with liberal arts students strengthened the business-related occupations on intelligence and whatever other dimensions they already participated in to a considerable degree. The business majors were not very understanding of the service and intellectual occupations. Apparently, they did not need to improve on the liberal arts perception of the personnel director which was quite favorable.

Additional insight into the differences between business and liberal arts students can be obtained by inspecting the ideal occupation preferences of the two groups. Table 35 lists the mean scores of the two groups and the rank orders of the like-to-be values. It is not surprising that the two sets of like-to-be values correlated only +.13. The business occupations plus lawyer were strongly preferred by business majors, while the intellectual and service fields that attracted liberal arts students were low on the preference lists of business students. Two business fields were quite low in business students' preferences, office supervisor and retail store manager. For students studying to take a

Table 35

IDEAL OCCUPATION PREFERENCE SCORES (LIKE-TO-BE) FOR BUSINESS ADMINISTRATION STUDENTS AND LIBERAL ARTS MAJORS

Occupation[a]	Liberal Arts Mean Like-to-Be Score (N = 232)	Rank Order	Business Adminis. Mean Like-to-Be Score (N = 89)	Rank Order
Doctor	2.63	1	3.77	7
College Professor	2.70	2	3.94	10
Lawyer	2.82	3	2.94	3
Scientist	3.02	4	4.55	13
Business Executive	3.19	5	1.85	1
Engineer	3.66	6	3.78	8
School Teacher	3.67	7	4.54	12
Industrial Manager	3.88	8	2.88	2
Personnel Director	3.90	9	3.28	5
Social Worker	4.15	10	5.20	14
Artist	4.20	11	5.53	15
Office Supervisor	4.75	12	3.79	9
Sales Manager	4.94	13	3.41	6
Retail Store Manager	5.18	14	4.18	11
Accountant	5.24	15	3.19	4

[a] Occupations are rank ordered on the liberal arts group means.

place in the corporate world, such positions could only be way stations. The strong preference for personnel director expressed by business majors suggests that the absence of scale differences in perceiving his image between the two groups attests to his established position within the liberal arts hierarchy of preferred occupations. Clearly, the like-to-be comparison supports the general results obtained by comparing occupation scale score profiles for liberal arts men and business administration majors.

Engineering Students

A great deal of interest has focused on undergraduate engineering students in recent years. A steady decline of engineering enrollments has been observed at a time when college attendance has risen at an unprecedented rate. At the same time, the need for graduate engineers has continued to increase. With more students in college and more good jobs for engineers, why is it that there has been a steady annual absolute decrease in freshman undergraduate engineering students? Among the many explanations that have been advanced including competition from other fields, and higher standards, very little attention has been paid to the possible effects of the image of the engineer. Business observers have become very conscious about student perception of their fields, but the engineers have not paid attention to such irrational factors. It may be that engineers should look to the somewhat unattractive picture their profession projects to many undergraduate students. In any case, in this section, the perception of the occupational world by pre-professional engineering students will be the center of discussion. Do the engineers compared with liberal arts majors see engineering and perhaps other professional areas differently? To answer this question the mean occupation scale scores of 232 male liberal arts freshmen and seniors at the midwestern public university were compared with occupation scale scores of 100 freshman and senior engineering majors.

The first impression obtained from inspecting the data is the similarity of the images held by the two groups of students. The correlations of the profiles of occupation scale scores between the groups in 14 of the 15 cases ranged from a low of +.93 to +.98. With the exception of engineer only three occupations generated more than six significant differences on mean scale scores between liberal arts and engineering students. The artist was perceived differently on nine scales when the two groups were compared. Basically, the engineers compared with liberal arts undergraduates perceived the artist as less intellectual. He was rated less intelligent, sensitive, colorful, wise and valuable by the engineers. The engineers did not perceive the artist as quite so radical or excitable as did the liberal arts majors. These changes seemed to constitute a leveling by the engineers of the artist stereotype. The social worker was lowered in value on several scales drawn from several factors by engineering in comparison with liberal arts students. He was scored significantly less favorably on personal effectiveness, valuable, intelligent, self-assertive, and social status. This does not present a clear picture, save to suggest that the engineers probably saw social work as an unlikely and inappropriate profession for a man. Finally, the engineering students gave a slightly more positive cast to the business executive than did the liberal arts group. The engineering majors believed that the business executive was less conservative, somewhat more powerful in public affairs and also more prone to emotional difficulties. In fact, the engineers rated the business executive higher on the "ulcer scale" than all other occupations except artist. It is worth commenting that the scientist was not perceived differently by liberal arts and engineering students. The correlation of the two groups' mean scores on scientist was +.97 and the two groups differed significantly on only four out of 35 scales.

True to the pattern found among business administration majors, the engineers also had a different image of their own field than did the liberal arts representatives. This finding is particularly important against the background of agreement between the two groups on the other occupations. Engineers shared the same general conception of the occupational world with liberal arts students except for small differences in beliefs on artist, social worker and business executive. However, they did have a distinctive view of the profession they had chosen and for which they were training in a professional atmosphere. Engineering students compared with their liberal arts colleagues rated engineers significantly higher on intelligence, personal control, and strong confidence. The intelligence dimension comparisons had an important quality in that engineers heightened personal satisfaction, personal effectiveness, individualism, colorfulness, sensitivity, and unselfishness. To a lesser degree intelligence, wisdom, and value were emphasized by the engineering students. Personal control changes in the image of the engineer involved an emphasis on greater realism about life, self-sufficiency, responsibility, cautiousness, and a happier home life. The strong confident scales that engineering students raised in value were confident, active, optimistic, persevering, and self-assertive, among others. These changes constituted a strengthening of the image in important personality areas. The engineer in the minds of engineering college students emerged as a more positive and vigorous person on a series of scales that connote satisfaction, assertiveness, energy and dynamism. Comparing the engineer's engineering image with his scientist image, it appears that on intelligence, the engineer moved much closer to the scientist, but he did not equal the scientist on this factor even for engineering students. On the strong confidence dimension the engineering students shifted the engineer well beyond the scientist in the direction of an ideal image of strength and confidence. Other relationships between the two images were not changed markedly from the standard liberal arts pattern. The engineer shifted in the direction of matching the scientist in the intellectual sphere, and surpassing him in strength and confidence. The greater scores of the engineer on material success, sociability, and personal control were maintained, as was the greater conservatism of the engineer. The engineer image of the engineering students seems to describe a more independent, integrated, intelligent, and masterful professional rather than the "watered-down" scientist that he appeared to be for the liberal arts group. As with the business administration majors, the engineers did not glamorize their profession's image, but rather they strengthened and polished it.

The ideal occupation preference pattern for engineering students merits a brief discussion. Table 36 lists the like-to-be scores of the liberal arts and engineering majors rank ordered on the liberal arts means. The two sets of means correlated +.69, indicating a reasonably high level of agreement. The engineering majors showed an understandable bias toward engineering, followed by a strong secondary attraction to scientist and business executive. Industrial manager and the major professions were closely grouped at the next level of preference. Artist and social worker were decidedly less attractive to engineers than to liberal arts students. The great difference in the correlation of like-to-be professional and liberal arts means (+.13 and +.69) for business and engineering groups is probably an artifact of the large number of business-related occupations.

Male Education Students

A third pre-professional group selected for study consisted of teacher education majors. A sample of male and female majors was selected, on the assumption that the choice of education as a profession has a different meaning for men and women.

Table 36

IDEAL OCCUPATION PREFERENCE SCORES (LIKE-TO-BE) FOR ENGINEERING STUDENTS AND LIBERAL ARTS MAJORS

Occupation	Liberal Arts Mean Like-to-Be Score (N = 232)	Rank Order	Engineering Mean Like-to-Be Score (N = 100)	Rank Order
Doctor	2.63	1	3.34	5
College Professor	2.70	2	3.42	6
Lawyer	2.82	3	3.50	7
Scientist	3.02	4	2.64	2
Business Executive	3.19	5	2.71	3
Engineer	3.66	6	1.57	1
School Teacher	3.67	7	4.22	8
Industrial Manager	3.88	8	3.31	4
Personnel Director	3.90	9	4.73	9
Social Worker	4.15	10	5.62	15
Artist	4.20	11	5.25	13
Office Supervisor	4.75	12	4.90	11
Sales Manager	4.94	13	4.91	12
Retail Store Manager	5.18	14	5.46	14
Accountant	5.24	15	4.89	10

The enormous importance of teacher training in higher education and the great size of this profession provides ample justification for including education majors in the study. The supply of quality teachers has not been adequate to serve the nation's needs in recent history. Due to the great size of the education establishment and emigration from the field, it is unlikely that a satisfactory supply of talented and fully qualified teachers will ever be forthcoming. The teaching profession has traditionally attracted many fine and talented young people probably because of its positive image, rather than because of the extrinsic rewards and working conditions it offers.

A more compelling reason for examining the occupational outlook of education students is their potential impact on their own students in the future. Many education students will soon be shaping a view of the world for their elementary and secondary school pupils. Will they convey distinctive images of various occupations, or do they share in the liberal arts college student standard view of the occupational world? It is the image-making role of the teacher which gives significance to this analysis.

First, the images of male education majors will be explored. It is likely that the future administrators will be drawn from this group. A comparison was undertaken of the mean scale scores on 15 occupations of 86 male freshmen and senior majors in the School of Education of the midwestern public university and 232 male liberal art majors on the same campus. The most important result to be reported from this comparison is the very high level of agreement between the two groups. The range of correlations for the 15 occupation comparisons was from +.93 to +.98, representing close to an upper limit of attainable agreement assuming some sampling error. A second interesting feature of the male education students' scores was that they tended to shift the means of all 15 occupations to the positive end of the scales. To coin an awkward phrase, this might be called "male educator optimism." The male education students compared with liberal arts majors held the same pattern of ratings of each occupation, but they had a more positive view of all occupations. This favorable view was quite selective in that it concentrated on certain scales, and was consistently in the positive direction.

In addition to the school teacher, the social worker, engineer, accountant, retail store manager, and office supervisor were all altered on a significant number of scales by the education students. Social worker contributed the largest image difference between liberal arts and education samples. The male education students attributed to the social worker greater personal control in terms of calmness, caution, realism, wisdom, and responsibility. They also rated the social worker higher on strength and confidence by giving him higher scores on the strong, confident, active, self-assertive and optimistic scales. These dimensions represented character weaknesses in the liberal arts image of the social worker as an occupation for men. The sociable and self-sacrificing features of the image retained their exceptionally high values for the men education majors. Thus the education students strengthened social worker as a possible career for men.

The engineer was perceived by the education majors as possessing greater strength and confidence and a greater measure of material and social success. The success factor was represented by significantly higher scores on wealth, social status, and power in public affairs. An almost identical pattern of differences was evident in the image of the retail store manager. The accountant image was accorded greater strength and confidence by the education men. In addition, the accountant was scored higher in sociability on the sociable and socially popular scales among others. The office supervisor scores were strengthened exclusively in the strength and confidence dimension. It is interesting that engineering and three lower-level business-related fields were adjusted upward in addition to social worker. The latter is an alternative service field for male teachers and its image was adjusted accordingly. The better perception of the business fields may reflect the administrative orientation of male education students. Since many of them recognize that they will be called to administrative posts, they may be expressing a sympathy with these supervisory roles. It should be noted that the male education majors tend to attribute greater strength and confidence to many occupations. It is likely that this is an area of sensitivity for the male education majors; therefore, in comparison with liberal arts students they projected an excessive level of strength and confidence onto most occupations.

How does the education major perceive school teacher, and does he invest it with greater strength and confidence? The male education students compared to liberal arts majors assigned much more strength and confidence to school teacher as indicated by the following scales that differed significantly: confident, persevering, strong, realistic about life, intelligent, responsible, active, optimistic, wise, and valuable. This was a major area of concern for the young male educators. These students also added considerably to the intelligence of the teacher, and his sociability was strengthened somewhat. Finally, the teacher was given a prettier wife by the would-be teachers. In prettiness of wife the teacher is ranked 13th by the liberal arts majors and 9th by the future educators. The weakest aspects of the teacher image, except for his economic situation, were strengthened by the teachers. He was awarded much more strength, assertiveness, and confidence. The teacher is a more masculine figure for these male education majors. It is very probable that the male education majors are on the defensive about the feminine cast of education and tend to perceive all occupations in masculinity-femininity terms to an unusual degree. As was indicated in Chapter V, the liberal arts image of the school teacher is generally favorable except for his low standing in material and social success.

Table 37 presents the ideal occupation preference scores for the education and liberal arts majors. The two groups correlated +.83 on this scale establishing a high level of agreement for the preference item. The data provided the first professional instance in which the pre-professional occupation was given a second ideal choice. College professor, a different image from school teacher, is equal to or more desirable than school teacher for male education students. It is possible that a fair proportion of these students aspired to college teaching roles (e.g., junior college) at a later time. Their intended occupation responses indicated that 11% expected to be college professors and 56% definitely planned on being school teachers. This result also raises a question as to whether the image of the school teacher had been shifted by the male education students in the direction of college professor. A careful inspection of scale values showed that on cultured intelligence and material and social success the school teacher and professor converged in the teachers' ratings. On sociability and conservatism the education majors widened the gap between the two professions; while on personal control and strength and confidence the teacher image moved to a new position of advantage in comparison with the college professor. In effect, the teacher's teacher approaches rather closely the strongest traits of the college professor and surpasses him on several important characteristics. It is clear that the teachers have established a very positive image to which to cleave.

Female Education Students

Women enrolled in education curricula represent the largest single block of students in higher education in a defined pre-professional program. It is, therefore, of some interest to investigate their views about the occupational world. Unlike the

Table 37

IDEAL OCCUPATION PREFERENCE SCORES (LIKE-TO-BE) FOR MALE EDUCATION STUDENTS AND LIBERAL ARTS MAJORS

Occupation	Liberal Arts Mean Like-to-Be Score (N = 232)	Rank Order	Male Education Mean Like-to-Be Score (N = 86)	Rank Order
Doctor	2.63	1	3.38	4
College Professor	2.70	2	2.20	1
Lawyer	2.82	3	3.09	3
Scientist	3.02	4	3.72	6
Business Executive	3.19	5	3.46	5
Engineer	3.66	6	3.75	7
School Teacher	3.67	7	2.28	2
Industrial Manager	3.88	8	4.21	9
Personnel Director	3.90	9	4.31	10
Social Worker	4.15	10	3.92	8
Artist	4.20	11	4.51	11
Office Supervisor	4.75	12	4.73	12
Sales Manager	4.94	13	5.04	14
Retail Store Manager	5.18	14	4.77	13
Accountant	5.24	15	5.19	15

male groups that have been discussed, women entering education are a dominant group in colleges and universities. There are very few recruitment problems in relation to women in education; rather there are a range of professional retention problems that lie beyond the college years.

The occupations questionnaire was not designed to get directly at women's views of occupational images for women. The questionnaire asked that respondents evaluate occupations as they "involve men in our society." Therefore, the central question that may be asked is: Do women majoring in education perceive the occupations as they involve men differently from women liberal arts majors? Each of the pre-professional curricula influence the occupational viewpoints of men to a significant degree. Does a pre-professional program have an influence on the views of women about men in the occupational world? In order to answer this question, the 15 occupation patterns of mean scale scores were compared for two groups of subjects, 160 liberal arts freshmen and senior women at the midwestern public university, and 81 freshmen and senior women majors in the School of Education at the university. The comparison revealed that in terms of occupational images involving men, women in liberal arts and education did not differ in any measurable way. They could have been two random samples of women drawn from the same population. The profiles of the 15 occupation scale scores yielded correlations when the two groups were compared ranging from +.93 to +.99. No occupation comparison gave rise to more than six scales that were significantly different. By all standard measures of similarity between two groups, liberal arts women and education women majors view the occupations alike. On this comparison, there is no measurable difference in outlook that arises from the special social and curricular experiences associated with an education program.

To summarize this section, it is noteworthy that students in pre-professional majors have a basic perception of the occupational world that they share with liberal arts students. However, the male pre-professional students view the field they plan to enter and closely related fields more favorably than do the liberal arts students. This more positive perception is composed both of a general upgrading of scale scores for the occupations and the selective improvement of scales grouped on specific factors. In each case the factors chosen for significant improvement bear a clear relationship to the meaning of the occupation profile. Like-to-be scores for the male pre-professional students change in ways that are quite consistent with the overall shifts in scale scores for the groups. Pre-professional students in ideal preference terms rate their profession and closely related areas as much more desirable than a parallel liberal arts sample of students.

It is clear from these data that the choice of an occupation by a man for a life's work is associated with a special perception of that field.

Graduate Osteopathic Medical Students

The main body of this study has concentrated on the views held by college and university undergraduates. Graduate students are of interest, but given the general nature of the images, it did not seem vital to include them in the design. Graduate students have already chosen their professional direction, so the images are not likely to be diagnostic although they could serve as criteria in studying undergraduate images. In addition, the academic and professional graduate commitments will be for fields that are viewed very favorably by liberal arts students such as college teaching, medicine, and law and offer little room for enhancement. The previous section on pre-professional students has described trends among undergraduate specialists in business, education, and engineering that are likely to persist among graduate students in these fields.

One graduate sample was tested because of its special and intriguing properties. This was a sample of freshman and senior medical students in one of the nine colleges of osteopathic medicine in the United States. Here was a group of graduate professional students, related to the strongest image in the occupations set, which at the time belonged to a much misunderstood sub-group of medical practitioners. It was hypothesized that the strong feelings between the osteopathic and allopathic medical wings would lead to changes in the images of the doctor by osteopathic medical students in comparison with liberal arts undergraduates. Specifically, it was predicted that the osteopathic students when compared with university undergraduates would have a less favorable image of the doctor (M.D.) and a much stronger perception of the osteopathic physician. The high evaluation of their own field would be a continuation of the pre-professional effect noted earlier, and the devaluation of the M.D. would represent a defensive strategy. Specifically, it seemed logical that the osteopathic students would lower the general score of the M.D. so that there would be space at the high or ideal ends of scales to insert the osteopath at the level normally reserved for the M.D. There was interest, also, in obtaining a view of the osteopath from the regular student population as a means of understanding in greater detail the image of the medical profession. These data might give a clue to the emotional elements in the controversy that rages in a number of states about the value and places of the two houses of medicine.

Random samples of 60 freshman and 60 senior medical students at the school of osteopathic medicine were selected to complete a specially constructed version of the occupations questionnaire in each of two successive years. That is, the freshmen and seniors in 1962 and the new freshmen and seniors in 1963 were included in successive samples. This technique of sampling in two successive years was employed to increase the number of freshmen and seniors questionnaires for analytical purposes. The small size of the graduate student body and the limited success of the samples necessitated this procedure. The class sizes were only slightly larger than the samples, ranging from 60 to 90. Table 38 summarizes the sampling procedure by listing the numbers and percentages of completed questionnaires that were obtained.

Table 38

NUMBER AND PERCENTAGES OF COMPLETED QUESTIONNAIRES

AT THE OSTEOPATHIC MEDICAL SCHOOL

Class	Academic Year	
	1961-62	1962-63
	N	N
Senior	30	33
Freshman	52	35
Total	82	68
% Completed	68%	57%

The traditional vigorous follow-up procedures were not used in this study. The data were collected by a volunteer agent who was a fellow medical student of the respondents. Primary emphasis was placed on obtaining a reasonable number of completed questionnaires from this exceptional population.

A modified version of alternate occupations list B that is presented in Table 24 was used in this study. The occupation title, professor in graduate school, replaced office supervisor in this special version of list B. This occupation was included to extend understanding of the academic specialties. The addition of a qualifying undergraduate to college professor was designed to distinguish between the teachers of undergraduate and graduate students and medical school faculty. Dentist was included in the list to give a wider representation of the health-related professions. Doctor (M.D.) emphasized the osteopathic and allopathic distinction. The title "Osteopathic Physician" was chosen as the least biasing available and intelligible term for the Doctor of Osteopathy. This decision was made in consultation with people who were involved in osteopathic medicine.

The first methodological question that arose was the feasibility of combining the medical student samples from successive years into a single sample. Comparison of the mean scale values of the two samples on the 15 occupations was executed to determine if there was evidence that the samples could have been drawn from the same population. The average number of significantly different scale means per occupation was 2.1, and the median correlation between the patterns of means for 15 occupations was +.96. Inspection of the data, knowledge of the sampling procedure, and the statistical similarity between samples led to the conclusion that these two samples could be pooled for additional analytical work. The distribution of scores indicated that these two samples could have been drawn from the same population.

In order to be able to relate the responses of the graduate osteopathic students to the reference sample, a special probability sample of 48 male freshman and senior liberal arts undergraduates at the midwestern public university were administered the regular alternate occupation list B questionnaire. The properties of this check sample were ascertained by comparing it with another male liberal arts undergraduate sample at the same university that completed the reference occupation list questionnaire. The average number of scales that were significantly different per occupation for the eleven common occupations was 1.3. The median correlation of the occupation profiles between the two groups on 11 occupations was +.94. There is no reason to believe that the liberal arts sample that responded to alternate occupation list B was different from the comparable reference occupation list samples.

Do the osteopathic medical students view the occupational world in the same way as the male liberal arts undergraduate students? The basic comparison of scale means for 14 occupations between the 150 male osteopathic medical students and 48 male liberal arts students provided an answer to this question. On 10 of the 14 common occupations the scale scores of the two groups of students did not differ significantly. The 10 occupations perceived in a similar way were: artist, business executive, engineer, lawyer, personnel director, sales manager, school teacher, scientist, undergraduate college professor, and dentist. This degree of agreement indicated that the two groups of students shared in the same basic language system about occupations. The images in which differences occurred should be projected against the background of shared connotations. For convenience, differences between the groups will be interpreted in terms of the special experiences of the representatives of the tiny subgroup of college students enrolled in the osteopathic medical school.

The osteopathic students held a more positive view of the accountant on the material and social success dimension, a factor on which he was quite weak for liberal arts groups. Otherwise, the osteopathic students did not reshape the image to any great degree. The osteopathic medical students also had a somewhat different perception of the social worker as indicated by a +.89 correlation between the two groups on this profile. According to osteopathic students compared to liberal arts students the social worker is less unsuccessful. His scores on low social status, not powerful in public affairs, wife is not pretty, and not well-to-do were shifted in a favorable direction. However, the medical students also accorded the social worker a lower standing on sociability and cultured intellect. These two occupation profiles represent minor but significant deviations from the liberal arts pattern.

Of primary interest in this special study is the comparative perception of doctor and osteopathic physician. The osteopathic students had a less positive view of the doctor (M.D.) than the liberal arts undergraduates. On nine of the 35 scales they gave a significantly lower mean scale value to the M.D. The osteopathic medical students assigned the doctor lower scores on several personal control scales: cautious, calm, no emotional problems, and happy home life. He was believed to have a lower standing on strength and confidence, and he was sharply downgraded on unselfishness and attentiveness to people. The osteopathic students, in contrast to the liberal arts population, eroded the confidence, control, and unselfish devotion to others of the M.D. However, given the very strong image of the doctor, the negative changes assigned by the osteopathic students did not alter the heroic outlines of this occupation. The profiles of mean scale scores of the two groups correlated +.90.

How do these groups compare in their views of the osteopathic physician? On this image there was a major difference of opinion between the samples. The osteopathic medical students were true to the pre-professional pattern in holding a much more favorable view of their profession than did the liberal arts students. The two groups agreed that the osteopathic physician experienced a high degree of material and social success and attained a middle-of-the-road standing on conservatism. On the other four evaluative dimensions the medical students raised the osteopathic physician's stock. They attributed to him higher cultured intellect, more personal control, greater strength and confidence, and more sociability. The positive but unexciting image held by liberal arts students of the osteopathic physician is canonized by the osteopathic students. The osteopath emerged as a confident, energetic, hard-working, and selfless servant of mankind. He derives a high order of satisfaction from his work. He is both valued by society and rewarded by it with the good things of life. The liberal arts students agreed with this image, but they ventured a much less dramatic statement of it.

It is instructive to inquire whether the osteopathic medical students had the temerity to defy the liberal arts convention of awarding to the doctor the most extreme favorable scores of all occupations on a number of scales. A comparison of the doctor (M.D.) and osteopathic physician mean scale scores within the osteopathic medical student group revealed that the medical students perceived the osteopath much more favorably than they did the M.D. The osteopathic students conceded to the M.D. a higher standing on material and social success, but on all other factors the osteopathic physician attained higher ratings. Basically, the osteopathic physician displaced the doctor by assuming his powerful image in the perception of these special medical students. Thus, a hypothesis that suggested this investigation has been supported.

The ideal occupation preference scores of the ostepathic medical students can be compared with those of liberal arts students as a device for understanding in greater depth the values held by the osteopathic medical students. Table 39 presents the like-to-be mean scale values by occupation with their rank orders for the two groups. The data show that the osteopathic physician was relatively low on the liberal arts students' preference scale. However, the high value placed on M.D. was shared by the two groups. The osteopathic students seemed to have a stronger orientation toward the professions than the liberal arts comparison group. The relatively low value placed on business executive by the medical students is quite unusual.

An internal analysis was made of the freshman-senior differences within the osteopathic medical student sample. This analysis was designed primarily to determine whether the medical

Table 39

IDEAL OCCUPATION PREFERENCE SCORES (LIKE-TO-BE) FOR OSTEOPATHIC MEDICAL STUDENTS AND LIBERAL ARTS MAJORS

Occupation[a]	Liberal Arts Mean Like-to-Be Score (N = 48)	Rank Order	Osteo. Med. Students Mean Like-to-Be Score (N = 150)	Rank Order
Lawyer	2.81	1	3.81	5
Business Executive	2.92	2	3.97	8
Doctor (M.D.)	3.00	3	2.41	2
Engineer	3.52	4	3.89	6
Scientist	3.60	5	3.05	3
Dentist	3.65	6	3.79	4
Social Worker	3.75	7	4.85	11
Personnel Director	3.83	8	4.83	10
School Teacher	3.85	9	4.48	9
Undergrad. College Prof.	4.10	10	3.90	7
Sales Manager	4.31	11	5.33	13
Osteopathic Physician	4.40	12	1.13	1
Artist	4.83	13	4.91	12
Accountant	5.27	14	5.74	14

[a] The osteopathic medical students responded to a modified version of alternate list B that included Professor in Graduate School in place of Office Supervisor; therefore, only 14 occupation comparisons were possible.

students arrived at professional school with the views of the health-related professions that have been described, or did these develop and evolve over the four years of medical education. The freshman-senior comparison showed no differences beyond chance on the mean scale scores of dentist, doctor (M.D.) or osteopathic physician. The respective correlations of profiles between freshmen and seniors were dentist +.95, doctor +.92, and osteopathic physician +.97. It is very probable that the perceptions of the medical professional groups that have been described as characterizing the osteopathic students were formed prior to their joining the student body of the osteopathic medical school.

There is a final, rather interesting, analysis of this data that should be reported. It was hypothesized that there are two types of osteopathic medical students: those who are positively committed to osteopathy, and those who have accepted osteopathic training in lieu of equally or more desirable allopathic training. It was also predicted that those osteopathic students who were favorably disposed toward allopathic medicine would have a positive image of the M.D., while the pure osteopaths would be less favorable to the M.D. In order to test this prediction, the osteopathic medical students were divided into two groups on the basis of their like-to-be responses to the doctor (M.D.) professional choice. One group consisted of 104 students who gave a 1 or 2 rating (very close to like-to-be) to doctor (M.D.), and a second group was made up of 46 students who indicated a 3-7 rating (neutral and close to not like-to-be) on the doctor (M.D.) scale. It was assumed that those showing a preference for doctor contained a higher percentage of the students who were positively disposed toward allopathic medicine.

The regular two-group comparison of all occupations on mean scale scores was carried out. As expected, the group giving a favorable M.D. like-to-be score recorded a more favorable image of doctor (M.D.) than the group that gave a lower like-to-be score to M.D. The doctor was rated significantly more favorably on 13 scales by the like-to-be M.D. students. This group rated the M.D. more conservative, successful, and more strong and confident. The correlation of scale score profiles on M.D. was +.74 for the two groups. Dentist also fared quite well at the hands of the like-to-be M.D. people. He was rated more favorably by the pro-M.D. group on 11 scales concentrated heavily in the success and cheerful sociability factors. Here the correlation between the two groups reached +.91. A correlation of +.97 describes the association between the two profiles of osteopathic physician held by the more and less pro-M.D. people. The M.D. oriented group rated the osteopathic physician significantly higher on seven scales. These scales were primarily in the material and social success dimension. No other occupation in the series generated any differences beyond chance in a comparison of these two groups of osteopathic medical students. Therefore, it appears that the disposition toward doctor (M.D.) as a career is an important attitude in determining the orientation of osteopathic students toward health-related fields as evidenced by the effect on the dentist and doctor images. Those students who would like-to-be an M.D. think quite highly of him compared with the osteopathic students who are neutral or rejecting of the M.D. role.

This study of graduate osteopathic medical students confirms the trend to give a higher value to one's own professional specialty in comparison with a liberal arts norm that was observed among pre-professional undergraduates. As with the undergraduate pre-professionals, the heightening of one's own field is concentrated on its strong features. The osteopath achieves greatness as an image when rated by osteopathic students. It is important to recognize that this graduate sample gave every evidence of belonging to the same world of linguistic discourse about occupations as the undergraduate liberal arts majors.

Chapter VIII

EFFECTS OF REGION AND OTHER DEMOGRAPHIC VARIABLES

Regional Effects

A main topic in the first study was the analysis of the effects of demographic variables on the images of occupations. Detailed attention was given to differences in the images held by men compared with women, private versus public college students, freshmen versus seniors, students from different socio-economic levels, and students from professional family backgrounds compared with students from business families. The variables differed markedly in importance with the male-female dimension being of greatest significance and the public-private dichotomy next in importance. The general conclusion derived from the analyses was that demographic factors considered as a whole have a relatively minor impact upon the images of occupations. However, the differences that appeared between groups compared on demographic criteria were psychologically interesting and provided insights into the ways different groups approach the occupational world. A brief summary of findings from the earlier study supplemented by some further observations from this research will be presented later in this chapter.

All of the data reported in the first study were collected at a group of northeastern colleges, thereby eliminating any opportunity to test for regional differences. The nature of the reference occupation set consisting of high-level professional and business occupations suggested to some observers that regional differences of some importance in images might be found. A number of commentators indicated that they believed differences in attitudes toward some of the professional and business fields existed in different parts of the country. For example, it was suggested that the engineer would be regarded with greater respect, accorded a higher status, and associated with more favorable characteristics in the North Central States than in the Northeastern part of the nation. In addition, some of the more practical business occupations were believed to be more highly regarded in the upper Middle West than in the professionally oriented East. Because of the great concentration of heavy industry and national productive capacity in the upper Middle Western part of the country, the visibility and public awareness of the man of practical affairs, the engineer and the business manager, is greater and should have an impact on the views of college students. These were admittedly intuitive reactions on the part of knowledgeable observers in the fields of counseling and guidance and the psychology of occupations. The work of Remmers and Radler (1957) and Campbell (1960) provided empirical evidence which led to the expectation that college students in the midwest would perceive fields with applied connotations differently and more favorably than eastern college students. Other studies such as that of Knapp and Goodrich (1952) analyzing the origins of participants in various fields of endeavor provided additional support for this prediction.

In order to test the regional hypothesis, samples of students at the two midwestern institutions described in Chapter I were given the occupations questionnaire. These data were then compared with results already obtained from students in eastern colleges and universities. The midwestern private co-educational liberal arts college was selected for comparison with the eastern private men's and women's colleges included in the first study. The midwestern liberal arts college was a highly selective institution with a student body of approximately 2,000. There are no private men's and women's colleges in the Midwest that would provide adequate comparisons with the single-sex institutions of the East. Therefore, a midwestern co-educational college that seemed similar in atmosphere and standards to the eastern private colleges was chosen for inclusion in this regional comparison. The midwestern public university that was selected appeared to be a reasonable counterpart of the eastern public university which had already been studied. In keeping with the regional standard, the midwestern university was almost three times as large as the eastern university. Its position in the state and region, and its general curricular emphases were such as to suggest that in combination with the eastern university it would offer an adequate test of regional differences in occupational images. The best test of the appropriateness of these selections is to compare the characteristics of students at the eastern and midwestern institutions.

In Table 40 the occupational status of the fathers of students at the eastern and midwestern private colleges and public universities is described. This analysis will serve as a crude but effective device for determining whether the family backgrounds of students at these institutions are sufficiently alike to establish that the colleges serve similar clienteles in different parts of the country. Inspection of the table reveals that the selection of colleges was remarkably successful. There are probably few other regional institutional comparisons that would

Table 40

OCCUPATIONAL STATUS OF FATHERS OF LIBERAL ARTS COLLEGE STUDENTS[a]

	Private Colleges			
	Men		Women	
Occupational Status of Fathers	East.-A (N=154) %	Midwest. (N=215) %	East. (N=219) %	Midwest. (N=211) %
A. High-Status Professional (Doctor, Lawyer, College Professor, etc.)	32	43	40	56
B. Lower-Status Professional (School Teacher, Pharmacist, Librarian)	3	9	6	5
C. High Managerial and Entrepreneurial (Executive Positions)	14	14	21	22
D. Middle Managerial and Entrepreneurial (Managers)	27	16	26	12
E. Lower Managerial and Small Enterprise	9	7	5	2
F. White- and Blue-Collar Workers	5	8	2	3
G. Other, or Uncodeable	10	3	--	--

[a] The occupational status classification scheme is adapted from Warner, Meeker, and Eells (1949). It is used also in the succeeding table.

Table 40--Continued

Occupational Status of Fathers	Public Universities			
	Men		Women	
	East. (N=257) %	Midwest. (N=232) %	East. (N=273) %	Midwest. (N=160) %
A. High-Status Professional (Doctor, Lawyer, College Professor, etc.)	11	16	11	19
B. Lower-Status Professional (School Teacher, Pharmacist, Librarian)	5	4	8	2
C. High Managerial and Entrepreneurial (Executive Positions)	5	9	5	18
D. Middle Managerial and Entrepreneurial (Managers)	19	25	23	24
E. Lower Managerial and Small Enterprise	19	13	21	11
F. White- and Blue-Collar Workers	41	30	29	23
G. Other, or Uncodeable	--	2	3	4

yield comparable evidence of student body similarity. Within the private college category there is evidence that the midwestern private college draws its students from families of a slightly higher socio-economic status than the eastern men's and women's private institutions. In all cases the colleges draw their students primarily from high status professional families with a good representation of students from higher level business and industry families. The children of lower status professionals and managers, and white and blue collar workers rarely enroll in these highly selective and very expensive private institutions. The two regional public universities, on the other hand, draw their students primarily from families in the middle management, lower managerial, and white and blue collar ranges of employment. The similarity in student origins between the two public universities suggest that each plays a similar role in its region. On the basis of these data it can be stated with confidence that the institutions selected to represent Eastern and Midwestern higher education are adequately matched in terms of the college populations that they serve. A second test of the characteristics of these regional institutions can be obtained by comparing the occupational aspirations of the male students in the several colleges. In Table 41 the occupational status aspirations of male college students at eastern and midwestern institutions are compared on the basis of their expressed career plans. This table lists the percentage of students at each college that intend to enter occupations at the various status levels indicated. In the private colleges a higher percentage of the midwestern students in comparison with eastern students are oriented toward the high status professions. This is consistent with the fact that a larger percentage of the midwestern students come from families in the high status professional range. There is a slightly smaller emphasis on business careers on the part of the midwestern students, and this trend also is consistent with the patterns of the family origins of students at the two colleges. The public universities show considerable similarity in terms of the occupational intentions of liberal arts students. The most frequent ambition of these college students is to enter the professions with a relatively small percentage of both groups being drawn towards business and industrial positions. Table 41 establishes a clear similarity between the selected representatives of Eastern and Midwestern higher education in terms of the ambitions of their liberal arts students. It should be noted in passing that in the universities the vast majority of liberal arts undergraduate students are oriented toward the professions rather than toward business and industrial opportunities. The career aims of undergraduate liberal arts college students have been consistent

Table 41

OCCUPATIONAL STATUS ASPIRATIONS OF UNDERGRADUATE LIBERAL ARTS MEN

	Private Colleges		Public Universities	
Student Occupational Status Aspirations	East.-A (N=154) %	Midwest. (N=215) %	East. (N=257) %	Midwest. (N=232) %
A. High-Status Professional (Doctor, Lawyer, College Professor, etc.)	52	69	41	50
B. Lower-Status Professional (School Teacher, Pharmacist, Librarian)	10	17	28	18
C. High Managerial and Entrepreneurial (Executive Positions)	18	7	3	9
D. Middle Managerial and Entrepreneurial (Managers)	5	--	8	6
E. Lower Managerial and Small Enterprise	--	--	2	2
F. White- and Blue-Collar Workers	--	--	--	2
G. Other, or Uncodeable	16	8	18	13

throughout the period of this research study. These orientations have important implications for the allocation of undergraduate talent among career alternatives in the United States.

Of the many possible group comparisons between eastern and midwestern students only three will be discussed in any detail in this section. These key comparisons are midwestern public university freshman and senior men versus eastern public university freshman and senior men; midwestern public university freshman and senior women versus eastern public university freshman and senior women; and midwestern private college senior men versus eastern private college "A" senior men. The first two comparisons are obvious and do not require justification. The third regional comparison between private college senior men was selected because of the favorable time relation between these two important samples. These groups offer the one instance of student samples in the east and midwest that were tested at the same time under almost identical conditions. Therefore, this comparison offers an unusually good test of regional differences in the private college sector and will serve to represent the regional private college comparison.

The mean number of scales per occupation on which two groups differ is the best measure of the magnitude of regional differences. Public university men in the east and midwest differed significantly on an average of 5.2 scales across the 15 occupations. The mean number of scales on which women at the eastern and midwestern public universities differed significantly was 5.7. The average number of scales per occupation on which eastern private college men differed from midwestern private college men was 7.9. These data indicate that the differences between midwestern and eastern college students are of an order of magnitude comparable with the differences between freshman and senior students in any given college or university. Freshman to senior differences have been considered a minor source of variation in previous analyses compared with other factors as indicated in Chapter VI. Therefore, the impact of regional differences has to be considered relatively minor as an influence on the perception of occupations. The hypothesis that significant regional differences exist in attitudes towards the occupational world is not supported by these results. In spite of this general assertion it is still appropriate to examine the significant differences which do occur between eastern and midwestern college students.

First, turning to the public university samples, a general tendency was noted for the eastern university men to have a more positive attitude toward a range of occupations than the men from the midwestern university. The eastern university men gave higher ratings to doctor, college professor, and scientist among the high level professions and to the school teacher among the lower-level professionals. In addition, the eastern college students had a generally more favorable view of industrial manager while the midwestern men attributed more positive qualities only to personnel director among all the occupations. A careful inspection of regional differences occupation by occupation gives the following impressions. The doctor was rated more favorably on a number of scales by the eastern university men. In contrast to the midwestern men they regarded the doctor as having greater opportunity for advancement, and a happier home, and as being more thoughtful and sociable. The college professor, on the other hand, was attributed greater personal control and more conservatism by the eastern men. A good case could be made in support of a position that this was not a more favorable impression of the college professor. Rather, it may be argued that he was seen as more conservative, cautious, stable, responsible, dependable, and colorless in the east than he was by the midwestern students. The implications of this shift in the direction of greater conservatism and personal control are ambiguous and may well be negative in the evaluations of college students. The scientist was viewed as having greater personal control by the eastern university men and as more individualistic and less conservative. This suggests that eastern students saw the scientist more in control of his impulses at the same time as he was believed to be more free to take firm and forceful stands on issues of personal and political significance. There was a relative preference for the school teacher among the eastern men who gave to him greater personal control and a higher degree of colorfulness, unselfishness, and social popularity. These were not large differences but they represented a favorable attitude on the part of eastern public university men toward school teaching as an occupation for men. The eastern men compared with their midwestern colleagues saw greater personal control in the image of the industrial manager and they gave him a considerably better rating in sociability. Turning to the personnel director, it is apparent that the midwestern men believed he achieved more material and social success than did the eastern men who for their part gave him a higher rating on personal control. In none of these occupations were the differences between the two regions large nor did they indicate major differences in perception of the occupational world. There were no systematic differences in the uses of scales between the two samples of students, although the tendency mentioned above of eastern men to see greater personal control in many occupations suggested that this might be the case. The variances in scale means of eastern and midwestern men were of the same order of magnitude suggesting that there was no greater agreement about occupational profiles in one college than in the other.

The comparison of women students at the midwestern and eastern public universities yielded results similar to those observed in the comparisons of men. The pattern of significant differences between the groups on all occupations suggested that eastern women had a generally more favorable view of the occupations than midwestern university women. There were four occupations, doctor, college professor, school teacher, and industrial manager, on which eastern university women agreed with eastern university men about their superiority in comparison with midwestern university students. In addition, the image of the artist showed a difference in the views of eastern and midwestern women, but the direction of the difference was not clear. Eastern university women perceived the doctor as having a higher level of personal control and being more conservative. The college professor was attributed a higher level of personal control, cultured intellect, conservatism and social status by the eastern women. It is clear that the eastern women perceived a less volatile, interesting and impulse-ridden college professor than their colleagues in the Midwest. For the eastern women, the college professor was more conservative, cautious, conformist, as well as more stable, rational, calm, and self-sufficient. At the same time he had a greater interest in art, achieved more personal satisfaction in his work, had more good taste, and a higher socio-economic status. He seemed to be a more respectable upper middle class member of the occupational community in the view of the eastern university women. They heightened both his already well established intellectual qualities at the same time as they endowed him with a conservatism, calmness, and self-control that was not seen by their midwestern colleagues. The eastern university women were consistent with the eastern university men in projecting a more favorable image for the school teacher. According to the eastern college women in contrast with the midwestern women's views, he had a higher socio-economic status, greater social popularity, more intelligence, better taste, more interest in art, greater strength, and more self-assertiveness. At the same time the eastern women attributed to the school teacher greater conservatism, caution, and responsibility. On the whole, the school teacher emerged in the eastern women's ratings as a more desirable person in all the main dimensions of occupational evaluation. Artist is another occupation on which eastern and midwestern women showed some differences. The eastern women perceived the artist to be more self-assertive, popular, and more sensitive, while the midwestern women saw the artist as less excitable, having fewer emotional problems, and less radical.

These two sets of commentaries seem to indicate that the eastern women had a more extreme view of the artist and saw his romantic qualities of assertiveness, sensitivity, and radicalism in greater relief. In general, the eastern women differed most markedly from their midwestern colleagues in their perception of the college professor and school teacher. In both cases the eastern students held a more conventional view of these intellectually oriented occupations. They tended to give more positive characteristics on all of the dimensions of response to these two occupations raising them to a more favorable status and according each of them a less varied profile than was true for the midwestern students.

The third meaningful group comparison is between midwestern and eastern private college students. This analysis will be limited to the two most closely matched samples available for regional comparison. These are midwestern liberal arts college senior men and eastern liberal arts college A senior men. Both of these groups were tested in the last semester of the senior year in the spring of 1962. The testing conditions were almost identical for both samples, and the comparison between them does not involve any other extraneous complications. Other comparisons between private college groups would necessitate introducing a gap of time between testing dates such as that which is involved in the public university comparison. There were two clear patterns of differences between the midwestern and eastern private college men. The midwestern group had a more favorable outlook toward the two highly intellectually oriented professions, college professor and scientist. The midwestern student group also favored with higher mean score values three of the lower status business occupations: accountant, office supervisor, and retail store manager. Business executive and personnel director were also perceived somewhat differently by the two regional groups as was the school teacher. The patterns of difference that appeared were quite clear. The midwestern private college liberal arts men rated the college professor higher on strength and confidence, personal control, and cultured intellect. Essentially for the midwestern private college students he was more serene, dynamic, and intelligent than he was for the eastern college students who emphasized his expressive, impulsive, and emotional qualities. In the case of the scientist the pattern was somewhat different. For the midwestern students the scientist was very much more intelligent, higher in social and material success, more confident, and more sociable. His strong qualities of intelligence and confidence were underlined and his weaker standing on success and sociability was raised to a higher level. The scientist was a stronger and more compelling figure for the midwestern private college men than he was for the eastern college men.

In the second category of occupations which were favored by midwestern private college men, the accountant gained a strong advantage in the eyes of the midwestern student. His highly negative portrait based on such features as low social status, an unattractive wife, lack of success, and being not well-to-do was shifted to a less negative position. This also occurred for a variety of scales which belong in the cultured intellect factor such as conformist, worthless, not interested in art, colorless, has poor taste, and lacks personal effectiveness. On all of these scales the relatively negative characteristics attributed to the accountant by eastern college men were shifted toward a neutral or positive value by the midwestern men. In the same way, the low scores of the office supervisor on material and social success, cultured intellect, and strength and confidence were moved to a neutral value by the midwestern private college men. The eastern students attributed a higher degree of personal control to the office supervisor. In the case of the retail store manager, his scores on material and social success and strength and confidence were moved away from negative values by the midwestern students. The eastern students assigned greater personal control to the retail store manager as they did with the office supervisor. The midwestern contingent viewed the lower level business occupations more favorably in the realms of cultured intellect, material success, and strength and confidence. An analysis of the use of scales indicated that this trend could not be accounted for in terms of a shift in the meaning of these factors. Rather, it appears that there was a genuine difference in the perception of business occupations by the midwestern college men who saw them as less dismal occupational alternatives than their eastern colleagues. It is interesting to note that this trend was coupled with the fact that the midwestern students were more frequently from high status professional families than the eastern students who had more critical views of these business roles. This is one hint that appears in the data which is consistent with the hypothesis that midwestern students would be more sympathetic toward the business and industrial sphere than their eastern counterparts. The fact that college professor and scientist also shared in this more favorable outlook of midwestern students clouds the issue and casts doubt upon any general inference about regional differences. Before leaving this topic it is important to point out that the regional difference pattern that held for public university men and women is largely reversed in the private college comparison. Virtually no consistent regional effect is discernible in the data. Rather, the difference between public and private universities is emphasized by the results of the regional analysis.

A general technique that is used repeatedly throughout this report is to examine the ideal occupation preference scores of comparable groups to see if they yield confirming information for group differences in mean scale scores such as those that have just been reported. In Table 42 the ideal occupation preference scores of midwestern and eastern public university men are presented. Comparison of the two groups on the like-to-be scales indicates that midwestern and eastern students had very similar views of the desirability of the 15 occupational roles. Rank order differences of no more than two positions separated the two groups on any occupation. Lawyer and business executive, among the more favored occupations, had slightly higher positions in the eastern preference ordering, but the discrepancy between the two groups was not enough to require interpretation. Looking at the groups independently, it is interesting to note the like-to-be occupation groupings produced by midwestern men. Doctor, college professor, lawyer, scientist, and business executive formed a cluster of highly chosen occupations followed by a group of medium attractiveness beginning with engineer and ending with artist. At the low end of their preference ratings were the lower status business occupations with the exception of personnel director. These four least favored occupations were grouped distinctly in scale values from the preferred occupations. The eastern public university men displayed a slightly different pattern of preferences, in that lawyer was the most highly preferred by a margin unmatched in the midwestern sample followed by doctor, business executive, college professor, and scientist completing the same group of highly preferred occupations selected by midwestern men. The group of middle-range attractiveness for eastern students contained only four occupations, and social worker and artist were grouped with the lower status business occupations at the least preferred end of the ranking of occupations. It is surprising to find that midwestern men placed social worker and artist in the more desirable middle cluster of occupations when compared with eastern public university men. This is somewhat at variance with the general expectation that the midwestern students would be more practical, more oriented toward material things, and less service oriented than eastern university men.

Table 43 summarizes the ideal occupational preference scores for midwestern and eastern private college senior men. The first notable element in these data is the high status accorded college professor as an ideal occupation by both groups. The college professor was in the first position by a substantial margin for both private college samples. Second, the scientist was given a strong preferred rating by midwestern students compared with his less ideal position in the rank ordering of the eastern college

Table 42

IDEAL OCCUPATION PREFERENCE SCORES (LIKE-TO-BE) FOR MIDWESTERN AND EASTERN PUBLIC UNIVERSITY MEN

Occupation	Midwest. Mean Like-to-Be Score (N = 232)	Rank Order	Eastern Mean Like-to-Be Score (N = 257)	Rank Order
Doctor	2.63	1	3.07	2
College Professor	2.70	2	3.09	4
Lawyer	2.82	3	2.70	1
Scientist	3.02	4	3.17	5
Business Executive	3.19	5	3.08	3
Engineer	3.66	6	3.93	7
School Teacher	3.67	7	3.70	6
Industrial Manager	3.88	8	3.94	8
Personnel Director	3.90	9	3.94	8
Social Worker	4.15	10	4.75	12
Artist	4.20	11	4.40	10
Office Supervisor	4.75	12	4.77	13
Sales Manager	4.94	13	4.61	11
Retail Store Manager	5.18	14	4.92	14
Accountant	5.24	15	4.96	15

Table 43

IDEAL OCCUPATION PREFERENCE SCORES (LIKE-TO-BE) FOR MIDWESTERN AND EASTERN PRIVATE COLLEGE SENIOR MEN

Occupation	Midwest. Mean Like-to-Be Score (N = 99)	Rank Order	Eastern Mean Like-to-Be Score (N = 167)	Rank Order
College Professor	2.05	1	2.62	1
Scientist	2.86	2	3.68	6
Doctor	2.99	3	3.19	4
Lawyer	3.34	4	3.05	3
School Teacher	3.38	5	3.90	7
Artist	3.45	6	3.02	2
Engineer	4.10	7	4.37	8
Social Worker	4.30	8	4.60	9
Business Executive	4.39	9	3.42	5
Personnel Director	5.12	10	4.61	10
Industrial Manager	5.15	11	4.71	11
Accountant	5.75	12	5.93	15
Office Supervisor	5.79	13	5.65	13
Sales Manager	6.08	14	5.45	12
Retail Store Manager	6.14	15	5.81	14

men. This ranking was consistent with the much more favorable profile of the scientist produced by the midwestern private college men. The eastern college men ranked the artist in the second position at a much higher point in their preferences than the artist was given by midwestern students. The eastern college men also ranked the business executive at a more favorable level than did the midwestern sample. The high preference for artist of the eastern college men represented an interesting development in their perceptions of occupations which has been described in Chapter VI. Although the midwestern college students were highly sensitive to aesthetic and artistic values this was not accompanied by a preference ranking of the artist at the top of the occupations set. The midwestern men had a generally more favorable view of business occupations than their eastern colleagues, but the business executive was clearly more highly valued as an ideal occupational possibility by men in the eastern college.

An examination of the two rank orderings of like-to-be scores indicates that for the midwestern men the cluster of most highly valued occupations included college professor, scientist, doctor, lawyer, school teacher, and artist. The range of occupations in the middle ranks of preferences were engineer, social worker, and business executive. Beyond that level were six business occupations at the third tier of desirability for midwestern private college men. The rank ordering of occupation preferences was clear for the midwestern private institution with the professions and art ranking highest and the lower level business occupations including industrial manager all rated as relatively undesirable career possibilities. The eastern college men added business executive to the professional group of occupational alternatives in their category of highly desirable fields. They developed a middle range of occupations including in rank order: engineer, social worker, personnel director, and industrial manager. Finally, they listed the four remaining lower level business occupations at the low end of ideal career preferences. It appears then that eastern college men had a more favorable view of business career alternatives than the midwestern men since they placed business executive in the most desirable category and rated personnel director and industrial manager in the second level of desirability.

The regional differences between midwestern and eastern college students were of approximately the same order of magnitude and importance as differences between freshman and senior students in any given college or university. The number of significant differences observed between regional groups were just significant at the 5% level; therefore, it is important not to over-interpret the influence of region in shaping occupational images. Some of the specific distinctions in images held by eastern and midwestern students at both public and private universities have been explored in this section and they present possible clues as to value orientations that can be found in these two areas of the country. The major hypothesis that there would be important regional differences in orientation to occupations was not supported by the data.

Additional Commentary on Demographic Variables

The effect of region on the profiles of occupations has been studied at considerable length since it represented a specific hypothesis to be tested in this study. The influence of other demographic variables was explored at great length in the first study. It is generally observed in psychological research that values and attitudes differ as a function of the life experiences of the subjects being tested. Therefore, different experiences associated with socio-economic class, religious origin, nature of the community in which the person grew up, type of college attended and similar factors tend to have an effect upon the measurable attitudes expressed by subjects. However, it has been pointed out in Chapter II and subsequently that the consistency of these data does not give much room for demographic variables to have an influence. The images of occupations apparently are established in a way that is relatively independent of the normal range of experiences associated with various family and personal background characteristics. As was suggested earlier, a verbal or linguistic system for dealing with the occupational world is associated with the college community in general rather than with sub-systems within that community. There are exceptions to this statement which are explored in this report, but they must be treated as special instances. A statistical estimate of the relative importance of the characteristics of samples of subjects can be obtained from the 39 group factor analysis reported in Chapter II. On the basis of that analysis it is estimated that approximately 90% of the variance in the data on the images of occupations can be attributed to occupational titles. In other words, the differences between the titles of the 15 occupations are the source of most of the variability that is discussed in this research. It is estimated that approximately 3% of the variance can be attributed to specific and error factors, leaving approximately 7% of the variance to be accounted for by characteristics of samples and demographic variables. Therefore, in the course of this chapter approximately 7% of the variance observed throughout the measurements taken in this study is being discussed. This is a warning against over-interpretation of the analyses which are associated with demographic variables.

In order to study demographic effects, which are quite interesting as long as they are projected against a background of data consistency, the data has been analyzed by a number of different variables taken one at a time. In other words, groups of subjects with specific demographic characteristics have been compared on the basis of a single variable. One of the standard measures which has been used in these comparisons is the average numbers of significantly different scales per occupation for the 15 occupations. Table 44 is presented to summarize the differences that were observed in the first study by O'Dowd and Beardslee (1960). It should be noted that an average difference of 4.2 scales per occupation is significant at the 5% level. The data in Table 45 indicate that sex is the most important demographic variable observed in these data. The differences between students at public and private universities are large and interesting, and they suggest that considerably more attention should be given to this important dimension of the world of higher education. The remainder of the demographic variables, freshmen versus seniors, family socio-economic background, and professional versus business family background, yield relatively small differences, and only the freshman and senior comparisons reach the 5% level of confidence. A thorough discussion of the effects of demographic variables on the images of occupations is contained in the first study and will not be repeated here.

Table 45 is presented to summarize new data on demographic analyses which have been produced as a result of further research. The table contains a summary of the effects of regional differences which were discussed in the earlier part of this chapter. There are two other sets of findings listed in the table that have been generated in the course of the present research. The results of additional work on the influence of family socio-economic status is listed at the end of Table . Comparisons of high and middle status students and of high status and lower status students at the state university showed once again that socio-economic background does not have an influence on the images of occupations held by students. This is one of the few cases of which the writers are aware in which socio-economic factors have no influence on measurements of a belief system. Ordinarily this type of data is relatively sensitive to family background experiences, and it was the expectation of the authors in the original design of the study that this would be a significant variable.

Table 44

MEAN NUMBER OF SIGNIFICANT SCALE DIFFERENCES PER OCCUPATION FOR SEVERAL DEMOGRAPHIC VARIABLES

RESULTS FROM THE FIRST STUDY

Demographic Variables	Mean No. of Sig. Diff. Scales
Men vs. Women	
Eastern Private Colleges	16.9
Eastern Public Universities	16.1
Public University vs. Private College	
Eastern Men	12.8
Eastern Women	14.5
Freshmen vs. Seniors	
Eastern Men's Private College A	4.1
Eastern Women's Private College	5.3
Eastern Public University Men	5.2
Eastern Public University Women	5.8
High vs. Middle Socio-Economic Status of Family	
Eastern Men's Private College A	2.5
Eastern Women's Private College	3.1
High vs. Lower Socio-Economic Status of Family	
Eastern Public University Men	2.4
Eastern Public University Women	4.0
Professional vs. Business Family Background	
Eastern Men's Private College A	3.1
Eastern Women's Private College	3.2

Table 45

MEAN NUMBER OF SIGNIFICANT SCALE DIFFERENCES PER OCCUPATION FOR SEVERAL DEMOGRAPHIC VARIABLES

RESULTS FROM THE SECOND STUDY

Demographic Variables	Mean No. of Sig. Diff. Scales
Midwestern vs. Eastern Colleges	
Private College Senior Men	7.9
Public University Men	5.2
Public University Women	5.7
Public University vs. Private College	
Midwestern Men	16.1
Midwestern Women	20.2
High vs. Middle Socio-Economic Status of Family	
Midwestern Public University Men and Women	0.9
High vs. Lower Socio-Economic Status of Family	
Midwestern Public University Men and Women	2.1

The new data indicate that the public university versus private college comparison in the Middle West generates large and important differences that merit further consideration. It will be noted that the public-private dichotomy in the Midwest has a greater effect in terms of mean number of significantly different scales than the analogous eastern comparison reported in the first study. This suggests that there may be an interaction between region and type of institution that merits additional exploration. It is reasonable to expect that the significance of public and private universities is not the same in the Middle West as it is in the Eastern part of the nation. In the Eastern states the first choice for a student seeking a quality higher education is almost always a private college. The state university is resorted to as a second choice by most students for reasons of opportunity and economics. It is clear that the tradition in the Northeast, in particular, has been to emphasize private higher education, and to give relatively little attention to the development and strengthening of the public universities. Only in the last decade has there been a growing awareness that the quality of higher education in the East cannot continue to rely exclusively upon the private colleges and universities. In the Midwest the distinction between high quality private and public education is not nearly so clear. The private colleges are primarily co-educational, liberal arts institutions, that are responsible for the education of a relatively small percentage of the total student enrollment in that section of the country. The public universities have much greater size and strength than in the East, and many are considered desirable alternatives by young people and their parents as college approaches. Therefore, in the Midwest a choice between two desirable alternatives is open to students. They may choose between the relatively intimate and personalized private college and the large, cosmopolitan and exciting state university. Under these conditions there should be a tendency for students to sort themselves to private and public education in a more selective manner when both of the options are considered first rate alternatives. The data presented earlier in Table 40 point out the differences in the populations drawn to several private and public institutions. The private colleges clearly attract the sons and daughters of high status professional parents with a smaller but significant representation of children from higher managerial level homes. In the public universities the largest contingent of students comes from middle management levels and white and blue collar families. Therefore, from the outset these two types of institutions are quite different in the clientele to which they appeal. It is worth noting in Table 41 that the occupational aspirations of the two groups of students turn out to be quite similar. If students are in a liberal arts curriculum either in a public or a private institution, they are likely to have ambitions in the higher status professional category and only a small segment of them will be oriented toward careers in business and industry.

A careful comparison of the occupational images held by private and public college students both in the East and Midwest indicated that institutional differences were very similar in the two parts of the country. In the Midwest and in the East the public university students rated a number of occupations more favorably than the private college students. The patterns of differences repeated themselves exactly except in those few instances in which either the midwestern or the eastern private college students held an unusually favorable view of a particular occupation. For example, in the East the business executive was regarded more positively by the private college students than by the public college students, counter to the general trend that was observed. This particular pattern was not repeated in the Midwest where the private college students did not have an unusually high regard for the business executive. In the Midwest the private college students rated the scientist as or more favorably than the public university students, while this pattern did not appear in the East. This was consistent with the high rating of the scientist by the students at the private college noted earlier in this chapter. Inspection of the data indicated that the public university students in the Midwest attributed a greater degree of cultured intellect to all occupations than their private college counterparts. The public university students also saw most occupations standing higher in material and social success than did the private college students. However, the main emphasis was on a higher level of cultured intellect for all occupations in the ratings of the public university sample. This represented an interesting difference in scale use between these two populations. It appeared that cultured intellect was used with greater care and discrimination by the private college students. There is evidence that they used the factor more sparingly and made finer discriminations along this dimension placing their most favored occupations at the highest end and putting the less favored at a lower point on these scales. It may well be a mark of sophistication to use cultured intellect as the factor on which to make fine discriminations among occupational titles.

The occupations to which the public university students gave markedly higher ratings than the private college students were: accountant, business executive, industrial manager, lawyer, office supervisor, personnel director, retail store manager, sales manager, and social worker. Only lawyer and social worker from among the professional occupations were included in this list which records stronger images for all of the business related fields in the views of public university students. The business occupations were moved to a stronger position on almost all scales contributing to the cultured intellect factor. The business occupations also were rated somewhat more highly on material and social success. It is noteworthy that not all of the favorable shifts in images were contributed by the public university students. The artist, for example, was seen as significantly higher on several cultured intellect scales by the private college students, while public university students attributed to the artist greater wealth and material success. College professor also was given a significantly higher score on cultured intellect by the private college students. The public university group gave to the college professor greater sociability and a higher score in material and social success. The lawyer was highly regarded among the public university students. They assigned to him not only greater cultured intellect but also a higher score on sociability, strong confidence, and material and social success. The lawyer came close to the cultural ideal for public university students who also gave him a strong position in their ideal occupational preference ratings. The social worker was regarded more favorably by the public university students but not on the cultured intellect dimension. They attributed to the social worker higher material and social success, greater conservatism, higher sociability, more strength and confidence, as well as a higher standing on personal control. The social worker's rating on cultured intellect was not adjusted upward either by men or women in the public university sample.

Another interesting observation can be made about this comparison between public and private university students in the Midwest. A comparison of the variances of the 720 means on which the two groups were compared (15 occupations X 48 scales) revealed that the variability of the state university mean scale values for both men and women was significantly higher than the variability found in the means for the private college students. When public university and private college men were compared, 124 of the variance values were significantly larger for the public university sample and only 15 were significantly larger for the private college sample. The analogous comparison for women showed that the variances of public university means were significantly larger than private university means on 116 comparisons and the private university means had significantly higher variances in 19 cases. Therefore, it is clear that there was greater agreement in rating occupations among liberal arts men and women at a small residential private college than among liberal arts men and women at a large public university. It appears that the variances of the means that are components of the occupational images reflect the institutional situations from which they emerge. The very high similarity of the distribution of significant variances for both men and women suggests that this is a sensitive indicator to the environmental differences in public and private institutions.

In this chapter the effects of selected demographic variables on the images of occupations have been explored in some detail. The findings from the first study on the relative importance of demographic characteristics were summarized. The significance of regional differences have been assessed, and the hypothesis that there would be significant differences in images as a function of regional variability has not been supported. The importance of region as a variable has been placed in a context giving it a value similar to that resulting from freshman and senior comparisons within particular colleges. Additional evidence was reported concerning the importance of the differences between public and private institutions. This has developed into one of the most interesting and important variables influencing the images of occupations. The original study included a comparison between public and private institutions in the Eastern part of the country. The effects observed in the eastern colleges were repeated in the Midwest with some regional variations consistent with regional differences in evaluating highly favored occupations. An important finding which has emerged from these analyses is the discovery of a significantly higher level of variability in scale scores among public university students compared with the private college students. This is the second time that the variability measure has revealed an interesting difference. In the longitudinal study a significantly lower level of variability was noted among seniors re-tested over a four year period suggesting that a convergence of views took place during college. Similarly, there is a higher degree of agreement among students in a private college committed to the development of a community point of view than in a public institution which is oriented toward the encouragement of pluralistic positions. The variability measure appears to be a rather sensitive indicator of campus climate which merits additional exploration.

Chapter IX

COLLEGE FACULTY MEMBERS' IMAGES OF OCCUPATIONS

Importance of Faculty Members' Beliefs

The beliefs and attitudes of college faculty members have been approached from at least two points of view during the past decade. One set of studies has been concerned with the way this large and influential segment of the professional world approaches a variety of important topics. Perhaps the most impressive study of this kind was by Lazarsfeld and Thielens (1958) in which they sought to determine the views of faculty members on a number of important political and social issues. As college faculty have assumed an important role as outspoken commentators on the issues of the day, increasing interest has been expressed about their values and attitudes. In particular, the response of faculty members to the war in Viet Nam has contributed to public concern about the stance of the intellectual in the United States as he is represented by the members of college and university faculties. Despite this concern there is relatively little research reporting in a systematic way on the beliefs of college faculty in the many areas in which their influence is felt. This chapter summarizes a small study that contributes some information on how faculty members view one aspect of the world, the world of occupations.

A second source of interest in the views held by college faculty members has emerged from the ever-increasing focus upon the importance of college teaching. Beginning with the upheaval on the Berkeley campus in 1964, there has been a growing public concern with the teaching role of the faculty member. Well before that time the teaching profession itself had begun to question seriously its effectiveness in pedagogical matters. If the role of the college faculty member as teacher of undergraduate students is of primary importance, then the beliefs and attitudes of the faculty member are also of great significance. It is particularly important to determine whether the views held by faculty members influence their students in a systematic way during the course of a college education. Do students come to view the world in a cognitive and emotional sense in ways that are increasingly similar to the views of their faculty mentors during period of time in which they are in contact with faculty? There is very little available evidence to indicate the impact or lack of it of a faculty as a whole on its students. This is in contrast with the extensive efforts in educational research to determine the effects on a class of one course or a relatively brief 10 or 15 week exposure to one faculty member. There is need for much more systematic effort to determine the changes in students' beliefs and attitudes during a four year period in college, and how these are related to the views held by faculty members. It may be that the primary source of influence on students in college is not the faculty but an institutional belief system which is transmitted from one generation of students to another relatively independent of faculty members and their values. It has often been said that faculty represent the major liberal force on most campuses while the students are conservatives. Except for isolated studies like the classic work of Newcomb (1958), the social sciences literature is largely silent on these points.

The Occupational Images Held by Faculty Members

In order to study the images of occupations held by college faculty members, a sample was drawn of the faculty of liberal arts college A. The sample was a stratified random sample designed to provide proportional representation of faculty members from three academic divisions, humanities, social sciences, and sciences; and from the standard academic ranks, instructor, assistant professor, lecturer, associate professor, and full professor.

The number of names drawn was 72 representing a 60% sample of the entire faculty. The O and C forms of the questionnaire which were distributed to college students were assigned randomly to participants in the faculty sample. Each member of the faculty included in the sample was approached by one of the authors and asked to cooperate in this study of college faculty views of the occupational world. Completed questionnaires were obtained from 70 of the 72 faculty members or 97% of the sample.

Faculty cooperation was excellent in spite of the reluctance of most faculty members to admit that they had any views or impressions about occupations and certainly none held any views that could be classified as stereotypes.

The faculty images of occupations can best be described by comparing them with the standard student images as they were produced by students at eastern liberal arts college A and have been described at length in other chapters. First, it should be noted that faculty members have basically the same perception of the occupational world as their students. There is more or less agreement on individual occupations, but the overall perception of the occupational world by college faculty is essentially the same as that held by college students. There is a tendency for faculty to shift the emphases in a particular occupation thereby changing the mean scale values for that occupation. However, the correlation of the patterns of mean occupation scale scores between faculty and students is very high. In comparing faculty images with those of college students, it was observed that faculty members have less favorable views of most occupations. Those occupations for which the faculty had the lowest regard in comparison with students were first, school teacher, followed closely by lawyer, doctor, and business executive. These occupations with the exception of school teacher were very highly regarded and also chosen in ideal preference scores with great frequency by the liberal arts students. School teacher was the occupation which distinguished students from faculty to the greatest extent; the importance of this fact will be discussed later. A second group of occupations was somewhat less well regarded by college faculty than by students but the discrepancy was not nearly so large as with the first grouping. These occupations included college professor, engineer, and social worker from the professional category, and personnel director, sales manager, office supervisor, and retail store manager from the business cluster. It is worth noting that college professor was among the occupations rated considerably less favorably by faculty than students. On four key occupations, accountant, artist, industrial manager, and scientist, faculty members held as or more favorable images than did students.

Turning to the ratings of specific occupations, it was found that the lawyer and the doctor were regarded less favorably by faculty members on the two key dimensions of cultured intellect and personal control. Both the intelligence and aesthetic sensitivity as well as the value and commitment to social service of these two occupations were regarded with considerable skepticism by faculty members. In addition, they did not agree with students on the degree to which these two professional groups were responsible, self-sufficient, cleancut, realistic about life, and experienced a relatively happy home life. On the other dimensions faculty were in agreement with students about the high standing of these two central professions. The business executive was regarded less positively by the college faculty almost entirely in the cultured intellectual dimension. They recognized his high standing on sociability, success and other dimensions of evaluation, but they did not agree with the ratings given the executive by students on intelligence, thoughtfulness, wisdom, artistic sensitivity, commitment to society, good taste and individuality. It is not uncommon to hear faculty members in and out of the classroom unburden themselves about their hostility toward the medical profession and the business world. Their outlook on lawyers is not so often expressed publicly, although it appears to be consistent with their critical views of the other high level professions. These attitudes of faculty found expression in their questionnaire ratings of these occupations. It is interesting to note that in comparison with liberal arts students they could not view these professions as nearly so well endowed with cultured intellect or internal personal and emotional control which were among their most positive features in the eyes of students. It appears that these occupations were perceived as more crass, more self-seeking and less serenely independent by college faculty members than by young people approaching the occupational world. Turning to the middle group of occupations that were regarded less favorably by faculty than students, the array included the four business related fields, office supervisor, personnel director, retail store manager, and sales manager. In each of these instances the faculty believed that the occupations participated less in cultured intellect than did students. In general these were occupations of lower intelligence, taste, sensitivity, individuality, unselfishness, and adaptability to life, according to faculty. They also lowered these four occupations on other dimensions but no clear pattern emerged for the category. The engineer fell in this group of somewhat less favored occupations, and he too was given by faculty a lower standing on cultured intellect and personal control similar to the professions in the first category. The social worker, on the other hand, who also participated in the medium reduction system was viewed by faculty members as considerably lower in sociability and material and social success. This indicates that the differences between faculty and students do change as various occupations are compared. On four rather varied occupations faculty members were in agreement with students about the characteristics of the fields. The accountant was regarded quite negatively by college faculty, but no more so than by students. The artist had a slightly more favorable image among faculty members than among students, although he was regarded relatively well by students. The industrial manager was given favorable scores by faculty in comparison with students. Inspection of the faculty ratings of industrial manager suggested that he had more in common with business executive for faculty than for students. Very likely there were different connotations associated with this title for these two groups. The scientist who was represented personally by a number of faculty members in the sample retained all of the limiting qualities which he had for the student population, but he was not seen as any less attractive across the various factors by faculty than by students.

Two of the key occupations have been omitted from the discussion and now merit some attention. First, college professor who was rated by both faculty and students received markedly lower scores from the faculty members than from the students who were studying with these college faculty members. The faculty attributed to the college professor a lower score in material and social success. They saw him as less wealthy, less successful, and having less power in public affairs than did students. The faculty members did not agree with students on the high status of the college professor in cultured intellect. According to faculty compared with students the college professor was less intelligent, wise, individualistic, deep, self-sufficient; he experienced less personal satisfaction in his work and he played less chess. On the strong confident dimension the college faculty members lowered their profession by viewing it as less confident, persevering, self-assertive, and hard. On several other items such as cheerfulness, social popularity, having a happy home life and realism about life, the faculty members also gave lower scores to their profession than did college students. This difference between faculty and students cannot all be attributed to a greater skepticism on the part of the faculty as a function of greater age and experience. It was apparent that when faculty members rated their profession in a context of others they were not able to assign the high scores that college students did, given their idealistic outlook concerning college teaching as one of the most desirable and attractive of all career alternatives. This finding is not consistent with the results reported in Chapter VII on the tendency of pre-professional students to enhance the image of their own field.

The strong negative outlook of faculty on the profession of school teacher also must be given a moment of attention. In the dimension of material and social success the faculty members in comparison with students lowered the status of the school teacher very greatly. They saw the teacher as less well-to-do, lower in socio-economic status, lower in success, less powerful in the world of affairs, having less opportunity for advancement, being somewhat more strange and less valuable. On the dimension of cultured intellect also, the faculty members were very hard on the school teacher. He was rated less intelligent, wise, thoughtful, deep, adaptable, and individualistic; he was less interested in art, did not play as much chess, did not derive as much personal satisfaction from his work and his personal effectiveness was considerably lower. The faculty also reduced the popularity and the strength and confidence of the school teacher to some degree. Evidently the students who come directly from high school still have rather strong positive impressions of the role of the school teacher with which they have had relatively recent contact. However, the faculty members, given their traditional skepticism about the effectiveness of the schools and the preparation of the students who come to them, have chosen to lay the blame for a great deal of the worlds ills at the doorstep of the school teacher. Perhaps to excuse his own lack of success in reforming the world the college faculty member is persuaded easily to blame his failures on the prior influence of the school teacher who is rated lower by college faculty members as compared with students than any other occupation. In general, the faculty members tended to be quite negative in comparison with students toward all of the high level professions with the exception of the scientist, and to be somewhat less favorably disposed toward the business occupations except for the accountant and industrial manager. There is a good deal of consistency between the regularly expressed antagonisms and hostilities of college faculty toward segments of the occupational world and the relative positions in which they locate specific images compared with a somewhat less outspoken population.

Effects on Faculty Views on Students

To what extent are faculty views of the occupational world influential in shifting the images of occupations held by freshmen in the direction of faculty images during the four years of college? In an effort to answer this question the mean scale scores of occupations obtained from the faculty of liberal arts college A were compared in separate analyses with those obtained from freshmen and seniors at the same college. Greater agreement would be expected between the seniors and faculty than between freshmen and faculty if the faculty had an effect on occupational stereotypes of students. The mean number of scales per occupation on which freshmen differed significantly from the faculty was 17.7. The seniors were in disagreement with the faculty on an average of 13.7 scales. These two means are not statistically different ($p<.10$); therefore, they cannot be used as evidence of faculty influence on students images of occupations. When all differences between freshmen and faculty mean scale scores were correlated with the corresponding senior and faculty differences a highly significant correlation ($p<.001$) of +.81 was found. In most cases then, an average difference in opinion between freshmen and faculty members predicted the existence of a similar difference between seniors and faculty members. The evidence for a change on the part of students in the direction of faculty beliefs was not obtained in this comparison. The somewhat smaller number of differences between seniors and faculty than between freshmen and faculty probably resulted from the patterns of scale use of these several groups. The faculty used the favorable ends of scales less often than students. They were not more reluctant to use the negative ends of scales, but they were less extreme in their favorable judgment. The effect of this was to make the faculty appear relatively more critical than the seniors who in turn were more critical of most occupations than the freshmen. This could account for the somewhat greater agreement among seniors and faculty in the three-way comparison. When these results are combined with those presented in Chapter VI on longitudinal effects, the results indicate that students influence one another more than they are influenced by the faculty in their views of the occupational world. The culture of the campus and its definition of the world of social reality probably impinges upon undergraduate students more steadily and effectively in belief areas than the views of faculty members which are often stated forcefully but relatively infrequently in the presence of students.

The ideal occupational preference scores of faculty members as well as freshman and senior students are reported in Table 46. This table provides an opportunity to compare the preferences for occupations of a group of people already occupationally committed with students who are still looking at the occupational world. Taken alone, the preferences of college faculty members indicated a strong attraction to that profession they have already chosen. They were favorably disposed toward the scientist who is rated next to the college professor in intellectual stature and the artist whose aesthetic orientation brings him close to the college professor in an important dimension. These highly desirable occupations were followed by a cluster of five professions which were heavily chosen both by students and faculty members: doctor, lawyer, school teacher, engineer, and social worker. In spite of the negative view that the faculty members expressed toward the school teacher, when this occupation was arrayed as a possible career choice among a number of others it earned a very favorable position. Business executive was granted ninth place followed by six business related occupations which had very low attractiveness indeed for faculty members. A comparison of students and faculty on ideal choices indicated a relatively high level of agreement between liberal arts students and their instructors. Only three occupations showed marked discrepancies in ranking between the two groups. First, the scientist had a much more

Table 46

IDEAL OCCUPATION PREFERENCE SCORES (LIKE-TO-BE) FOR FACULTY AND FRESHMAN AND SENIOR STUDENTS AT EASTERN PRIVATE LIBERAL ARTS COLLEGE A

Occupation	Faculty Mean Like-to-Be Score (N = 70)	Rank Order	Freshman Mean Like-to-Be Score (N = 77)	Rank Order	Senior Mean Like-to-Be Score (N = 77)	Rank Order
College Professor	1.48	1	2.95	2	2.47	1
Scientist	2.44	2	3.36	5	3.72	8
Artist	2.71	3	4.33	10	3.50	6
Doctor	3.84	4	3.05	3	2.63	2
Lawyer	4.06	5	3.23	4	3.10	4
School Teacher	4.15	6	3.66	7	3.10	4
Engineer	4.56	7	3.45	6	3.86	9
Social Worker	4.85	8	4.42	11	4.37	11
Business Executive	4.92	9	2.77	1	3.08	3
Personnel Director	5.45	10	4.04	9	3.63	7
Industrial Manager	5.59	11	3.94	8	4.23	10
Accountant	6.26	12	5.04	15	5.65	15
Sales Manager	6.31	13	4.68	13	4.72	12
Office Supervisor	6.39	14	4.50	12	4.94	13
Retail Store Manager	6.46	15	4.99	14	5.19	14

positive position within the faculty members' hierarchy of choices than in that of students. There was evidence that from freshman to senior year the students moved away from the preference for scientist expressed by faculty. Second, the students were less attracted to artist as an occupational possibility than were faculty members. However, when freshmen and seniors were compared it appeared that there was a tendency for students' views to move in the direction of those held by faculty. This has been confirmed in other samples which indicated that the artist grows in attractiveness for liberal arts students during the course of four years. Finally, the business executive who had a high position in the evaluation of students in almost all samples was accorded a relatively low preference rating by college faculty members who were not drawn in any way to the business world. In general, both groups were drawn strongly to the professions as compared with the business alternatives, although the college students felt that business executive was a possible role for them and ranked it high in the sequence of alternatives.

Differences in Images Within the Faculty

The nature of the sample of faculty members permitted some comparisons within the faculty on the images of occupation. Because the numbers in each category were quite small, it was not expected that large differences would be found between the groups of faculty members. One set of comparisons contrasted groups of faculty in academic divisions to determine whether there were differences in the outlook of faculty members with distinctive intellectual orientations. Thus, the humanities and science faculties, the humanities and social science faculties, and the social science and science faculties, were compared two at a time. The first comparison between humanities and science faculty members indicated a high level of agreement between these two groups of faculty on the images of occupations. The humanists had a slightly more favorable orientation toward the lawyer, office supervisor, and scientist than did the science faculty. In the case of the lawyer, the humanities faculty perceived him to be more of a cultured intellectual than did their counterparts in the sciences. While with the office supervisor the humanities faculty believed that he was more successful in the material and social world. Finally, it is interesting to discover that the humanists gave scientist a higher rating in material and social success, indicated by scores such as greater opportunity for advancement, more successful, and greater personal effectiveness. The humanities faculty also gave him higher scores on socially popular and calm. Although this was not a large difference, it indicated that the humanities faculty saw the scientific profession in a more favorable light than the scientists saw themselves. The data gave the impression that the scientists felt that they were not appreciated to the extent that they should have been, whereas the humanist saw the world showering recognition and material rewards upon the scientists for their active involvement in human affairs.

The comparison of humanities and social science faculties yielded a larger number of differences. The humanists again had more favorable views of occupations than social scientists, and they were decidedly more favorable to engineer, office supervisor, doctor, artist, lawyer, and retail store manager. The humanities faculty compared with social science faculty believed the engineer to have a higher standing in the cultured intellectual realm and in material and social success. The social scientists branded the engineer more conservative than did their colleagues in the humanities. In the case of office supervisor, the humanists saw this as an occupation with a higher level of material and social success and a lower score on conformity. The doctor also was favored by the humanities faculty who regarded him as more valuable, individualistic, personally effective, calm and socially popular than did the social science faculty. The retail store manager also was given a higher score on material and social success by the humanities faculty. Lawyer and artist were only marginally more attractive in the eyes of the humanities faculty than the social scientist, and in both cases they were given stronger scores on cultured intellect.

The final comparison between social sciences and science faculty revealed that only one occupation was regarded significantly more favorably by the scientists than by the social scientists. The doctor was given higher scores by the scientists on personal satisfaction, good taste, socio-economic status and valuable. Since some of the scientists had seriously considered medicine as a career alternative, it is not surprising that they produced a slightly more positive impression of this single occupation. On all other occupations the two groups of faculty members shared the same images. On the whole, the humanists had the most positive outlook toward the range of occupations. The scientists were next in their orientation toward the occupational images, and the social scientists were the least positive in their ratings of the occupations. In particular the social scientists downgraded occupations both in cultured intellect and material and social success in comparison with the other two academic divisions.

A comparison of the ideal preference scores of the three segments of the faculty are listed in Table . This set of data yields some interesting comparisons between the three divisions. It shows, for example, that for the humanities faculty college professor and artist were the two most highly preferred occupational alternatives. The social science faculty on the other hand recorded college professor alone as highly preferred, while the science faculty considered both college professor and scientist as occupational titles with which they could live with some pleasure. The differences between the three divisions are of some interest. The artist, for example, was rated much higher by the humanities faculty than other faculty. The humanists conceived of artist as a highly desirable occupational alternative in the way that the science faculty accepted the title scientist as attractive. The social science faculty were distinguished by an unusually high preference for lawyer and a marked partiality toward social worker. Both of these choices made good sense in terms of the specialities represented in the social sciences, such as political science, sociology, and psychology. It is worth noting also that the social sciences faculty gave low scores to doctor, engineer, and personnel director as occupational alternatives. The first two were quite understandable, but the low score on personnel director for social sciences faculty was perplexing. The science faculty rated engineer highly compared with the other two divisions as a possible alternative occupation, and they also gave a higher score to industrial manager. Both of these are roles which have some similarities to the role of the scientist, and it is not uncommon to find scientists working side by side with such specialists and on occasion moving into a role similar to that of the industrial manager. The one occupation in which the scientists deviated from the standards of the other two fields was lawyer, which they rated lowest among the professions. Given the relatively non-verbal orientation of the scientist, the discipline of law in spite of its rigorous logical and intellectual demands has relatively little appeal. In general these occupational preference scores followed rather closely an informed understanding of the orientations and activities of faculty in the three segments of the academic organization.

The data on faculty permitted one other comparison that seems worthy of discussion. It was possible to divide the faculty into faculty members at the senior faculty levels of full and associate professor and junior faculty holding the ranks of assistant professor, lecturer, and instructor. Given the difference in age between these two groups and the two educational milieus at the graduate level from which they came, it seemed quite possible that differences in perceptions of the occupational

Table 47

IDEAL OCCUPATION PREFERENCE SCORES (LIKE-TO-BE) FOR HUMANITIES, SOCIAL SCIENCES, AND SCIENCE FACULTY AT EASTERN PRIVATE LIBERAL ARTS COLLEGE A

Occupation	Humanities Faculty Mean Like-to-Be Score (N = 23)	Rank Order	Social Sciences Faculty Mean Like-to-Be Score (N = 20)	Rank Order	Science Faculty Mean Like-to-Be Score (N = 27)	Rank Order
College Professor	1.60	1	1.60	1	1.29	1
Artist	1.91	2	2.90	3	3.25	4
Scientist	3.26	3	2.70	2	1.55	2
Doctor	3.91	4	4.70	7	3.14	3
Lawyer	4.30	5	3.45	4	5.22	9
School Teacher	4.56	6	3.90	5	3.99	6
Engineer	4.82	7	5.60	9	3.59	5
Social Worker	4.95	8	4.10	6	5.33	11
Business Executive	5.25	9	4.90	8	4.66	7
Personnel Director	5.25	10	6.00	11	5.22	9
Industrial Manager	6.21	11	5.95	10	4.81	8
Accountant	6.47	12	6.65	14	5.81	12
Sales Manager	6.52	13	6.45	12	6.03	13
Retail Store Manager	6.56	14	6.55	13	6.33	14
Office Supervisor	6.60	15	6.65	14	6.03	13

world would distinguish the two segments of the faculty. In general, the younger faculty had more favorable orientations toward doctor, college professor, and business executive than their older colleagues. In the case of the doctor for example, the younger faculty gave him significantly higher scores on social popularity, bridge playing, power in public affairs, socio-economic status, cleancut, and having a pretty wife. The younger faculty members compared with their senior colleagues rated the college professor as more powerful in public affairs and socio-economic status, more interested in art, playing chess more frequently, and avoiding poker playing. The business executive was attributed a prettier wife, more socio-economic status, greater power in public affairs, and a more cleancut quality by younger faculty compared with their elders. These are three of the most popular and widely regarded occupations, and they gained greater favor among younger faculty than the older members of the university community. On the other hand, the older faculty viewed the artist as a person with greater status, more success, greater social popularity, and somewhat more conservatism. Finally, the personnel director was seen by younger men as being calmer and having a prettier wife, while the older members of the faculty attributed to him greater power in public affairs and more personal satisfaction in his work. These discrepancies in the images represented somewhat different views of the occupational world when two groups of the faculty were compared, but there were no major differences that separated faculty members trained in the 30's and 40's from those who came into the academic world during the 1950's. The only identifiable trend was that the younger faculty had a somewhat more optimistic outlook toward various high level professional occupations, perhaps because they had suffered so much less from the pressures of the depression and the postwar economic constraints on faculty members than had the older generation of college teachers.

The study that has been summarized in this chapter is one of the few attempts to measure the beliefs and attitudes of college faculty members in an area of some importance. It also gives a rare opportunity to assess the impact of the views of faculty members on their college students. The general findings are that faculty members have a somewhat different view of the occupational world than young people at the college level. In particular, faculty members have a rather negative attitude toward the high level professions and they are unusually critical of the school teacher and to a certain extent the college professor. No evidence could be found for a change in the views of college students during four years in the direction of the views held by their faculty members. There does appear to be some differentiation in the outlook of faculty members in the three academic divisions of the humanities, social sciences, and natural sciences, and also some minor differences appear between the views of faculty members who are at the senior ranks and those in the junior ranks. In a general sense, it is worth noting that college faculty members participate in the same orientation toward the occupational world as do college students.

Chapter X

THE OCCUPATIONAL WORLD OF WOMEN

Preliminary Considerations

This chapter describes a special research program that is referred to as the Women's Study. This represents the only effort of the Occupations Project to study the images of women's occupations as distinct from men's occupations. In this chapter a brief description will be given of the research procedures that were developed and the samples that were drawn. This will be followed by an analysis of the characteristics of occupations for women, both in contrast to the occupational world of men and in terms of the woman's occupational world. The profiles of a series of occupations generally entered by women will be presented. A special feature of the study permitted an investigation of the ideal occupational choices of women and their relations to men's preferences concerning the potential occupational commitments of their future wives.

All the attention of the Occupations Project except for this study was on occupations that are entered by men, and women were asked to evaluate the occupational world for men rather than for themselves. This choice did not reflect a lack of interest in women's occupations; rather it was a result of the fact that only a limited number of questions can be answered even in an extensive research program. Given the time and resources available, it seemed desirable to concentrate all the energy of the original study and a good part of this study on the occupational world that is entered by men. It was recognized that men are responsible for establishing the position of the family in the community, and his job is the main feature of a man's life that locates him in the economic and social structure. The family is dependent upon the male wage earner both for its sustenance and its place in the fabric of community life. A final consideration supporting the concentration of most of this research on men is the fact that the existing literature, what little there is of it, about the perception of the occupational world focuses almost entirely upon the occupational world of men. In spite of these arguments it seemed desirable to obtain some information on the occupational world for women in the course of this extension of the Occupations Project. Guidance counselors who serve high school and college students have indicated that their work would be facilitated if they had a better conception of the characteristics of occupations in the judgments of the young women. College placement officers have suggested that their work would be enhanced if they could be given additional information on women's views of the occupational world. Recently a third category of personnel workers, adult educators, have commented that as their work with women increases they are in greater need of detailed and thorough information about women and the occupational world. It is worth noting that there is increasing national interest in occupational opportunities for women. As the shortage of talented personnel in all of the high level professions and occupations grows more acute and more visible, the importance of attracting talented women into the labor market is becoming widely recognized. Whereas a decade ago women were seen primarily as competitors with men for positions, today there is great concern to increase the supply of highly qualified men and women in almost every major occupational and professional area. It is predictable that in the next decade a great deal of money and energy will be devoted to attracting women into the higher level occupations to both strengthen the fields and to serve society. This changing focus of the occupational world accounts in part for the Women's Study which is only a beginning to a very complex process of investigation. The study points the way toward a greater understanding of the position of working women, and it highlights some of the difficulties that will be encountered in trying to attract women into the occupational world before, during, and after their child-raising careers. The questions that will be answered in the following pages are concentrated on three general issues. First, what is the perception of a series of occupations that are entered by women and in which they constitute the major personnel? Second, are occupations perceived differently if a woman is entering the occupation rather than a man? Third, do men and women agree on the relative attractiveness of alternative occupations for women and wives? These questions indicate the outlines of detailed results which are contained in the data collected in the Women's Study, but will have to be reported later in a separate publication.

Method and Sample

The Women's Study was conducted during the academic year 1961-62. Samples of men and women undergraduate students were selected at four co-educational colleges and universities that were not included in any other parts of the Occupations Project.

The samples consisted of undergraduate men and women enrolled in arts and sciences curricula. The four institutions included: (1) a midwestern private liberal arts co-educational college (n=114); (2) a midwestern private co-educational university (n=102); (3) a midwestern public co-educational university (n=120); and (4) a southern public co-educational university (n=89). These four institutions were selected to represent a variety of educational experiences and student populations in the Women's Study. In each case the precise selection of the institution was dictated by personal acquaintance with a member of the college's faculty who was able to assist in the questionnaire study. A goal of the study was to obtain 120 completed questionnaires from each of the four campuses. The realization of this aim is indicated by the numbers listed after the description of each of the colleges. At each institution, a probability sample of students was chosen using the best available listing that could be obtained of current enrollments in the arts and sciences. Table 48 presents a summary of the number and percentages of students who completed questionnaires at the four colleges and universities combined. As in previous studies, women were easier to locate and somewhat more cooperative than men. The results from the four colleges are combined in Table 48 because they will be treated as contributors to a single sample in this chapter. The differences in occupation mean scale scores between the four institutions were so small as to provide statistical justification for combining the results. In the interest of economy, it will be possible to talk about student reactions to occupations for women without qualifying the results in terms of limited differences that exist between regions or institutional types. The overall success of the study in obtaining an 85.7% return of completed questionnaires is great enough to permit generalizations from this kind of data. The standard questionnaire distribution procedures described in Chapter I were used in the Women's Study.

It was necessary to adapt the occupations questionnaire to the needs of the Women's Study. First, the list of occupations had been developed for use with men and was only partly applicable to a study of women's occupations. It was desirable that some occupations should occur in both the men's and women's occupation title lists so that the influence of men and women as participants in an occupation could be measured. The new list was designed to include high level occupations which are entered primarily by women and make up a sample of the major available occupational alternatives for educated young women seeking careers. The literature on women's occupations was studied and discussions were held with people knowledgeable about the occupational world for women in deciding on what occupations to include. A list of 15 occupations was prepared and is presented in Table 49. This list

Table 48

WOMEN'S STUDY

NUMBER AND PERCENTAGE OF COMPLETED QUESTIONNAIRES FOR FOUR COLLEGES, COMBINED BY SEX AND CLASS

Four Colleges and Universities

	Sex			
	Women		Men	
Class	N	%	N	%
Senior	112	89.6	99	79.8
Freshman	117	94.4	97	78.2
Total	229	92.0	196	79.0

Table 49

WOMEN'S STUDY

ALTERNATE SET OF OCCUPATION TITLES FOR WOMEN

Identifying No.	Name
02	Actress
04	Artist
06	College Professor
09	Doctor
11	Executive Secretary
14	Home Economist
16	Journalist
17	Laboratory Technician
19	Librarian
21	Nurse
28	Retail Buyer
31	School Teacher
32	Scientist
33	Social Worker
34	Home and Family Career (No Job)

contains six occupations which were included in the original reference list of occupations for men. The six occupations common to the two lists are: artist, college professor, doctor, school teacher, scientist, and social worker. These occupations were chosen because they represent several important categories of occupations that are accessible to both women and men although several of the occupations, college professor, doctor, and scientist are not often entered by women. The other three bridging occupations are chosen with greater frequency by women than by men and represent the obverse of the first three in the men's occupational world. The nine new occupations were chosen to provide both a range of alternative occupational commitments and a set of occupations which are entered with great frequency by college graduates. The lower status professional category of occupations was expanded by adding librarian and home economist to school teacher and social worker. The expressive fields were expanded to include actress and journalist as well as artist. In addition, four new occupations were added that are primarily of interest to women and of a rather miscellaneous character. These are executive secretary, laboratory technician, nurse, and retail buyer. Finally, "home and family career" was put in the list not as an occupation but as a career alternative with the further specification that it indicated no job following college. These occupation titles were pre-tested to determine whether they elicited a reasonable range of responses.

The scales which constituted the occupations questionnaire for the Women's Study are listed in Table 50. This set of scales contains 17 drawn from the original occupations questionnaire for men and 17 new scales, bringing the total number to the standard 34 that was used throughout all main sections of the project. The 17 scales drawn from the male occupations questionnaire forms were included to provide a direct comparison between men's and women's occupations on key dimensions. These scales were chosen either because they were markers on factors which emerged from the main analysis or because they were particularly interesting from an interpretive point of view. The 17 new scales were selected as a result of interviews with women undergraduates and a survey of the literature. The new scales can be grouped for discussion into three broad categories. They are the "collegiate scales" which include: participates in extra-curricular activities, attractive to men, dates a lot, and academically successful. A second set of new scales that can be called the "status scales" consists of: comes from upper-class background, will be well-to-do, is upward mobile, and genuinely interested in people. A set of 7 scales that might be called the "sophistication scales" is made up of: worldly, well-rounded personality, poised, refined,

Table 50

WOMEN'S STUDY
SCALES USED IN THE WOMEN'S FORM OF THE OCCUPATIONS QUESTIONNAIRE

Scale No.	Scales		
20 C	intelligent	......	unintelligent
49 W	doesn't participate in extra-curricular activities	......	participates in extra-curricular activities
32 J	calm	......	excitable
30 C	unsure	......	confident
50 W	worldly	......	naive
51 W	attractive to men	......	unattractive to men
52 W	comes from lower-class background	......	comes from upper-class background
28 O	selfish	......	unselfish
53 W	high occupational goals	......	low occupational goals
24 C	cheerful	......	depressed
17 J	conservative	......	radical
13 J	great personal satisfaction	......	little personal satisfaction
32 C	irresponsible	......	responsible
31 O	sensitive	......	insensitive
22 C	has emotional problems	......	has no emotional problems
23 C	self-assertive	......	submissive
54 W	well-rounded personality	......	narrow personality
55 W	uncertain	......	poised
56 W	will not be well-to-do	......	will be well-to-do
29 O	wise	......	foolish
57 W	crude	......	refined
33 C	sociable	......	retiring
31 C	attention-demanding	......	self-sufficient
58 W	narrow-minded	......	open-minded
59 W	is upward mobile	......	is not upward mobile
60 W	indifferent to others	......	understanding of others
26 O	cautious	......	rash
61 W	interested in world affairs	......	has limited interest in world affairs
62 W	has few dates	......	dates a lot
2 J	conformist	......	individualist
28 C	realistic about life	......	unrealistic about life
63 W	intravert	......	extravert
64 W	genuinely interested in people	......	social climber
65 W	academically unsuccessful	......	academically successful

open-minded, interested in world affairs, and extravert. Two other new scales are more difficult to categorize; they are: high occupational goals, and understanding of others. These 17 scales were selected from a larger set which was pre-tested, revised, and refined. It was hoped that they would give added depth and interest to the assessment of the occupational world as it is perceived by and relates to undergraduate college women. A further complication was added to the design in an effort to study an important variable that might influence the images of occupations for women. It was reasoned that college women approaching occupations might be perceived rather differently if they were planning: (1) on a full-time career; (2) to enter the occupational world for a time prior to undertaking marriage and the raising of a family; or (3) to enter the occupational world following marriage and family. Three forms of the questionnaire were designed to measure the effects of each of these three possibilities and were distributed in a stratified random manner to the samples that have already been described.

The women's questionnaire instructions gave a more specific set to the respondents than the men's. The instructions focused upon "college women who are preparing for various occupational goals"; thus, the emphasis was upon undergraduate women preparing for a role in the occupational world rather than the more general set of judging occupations which was used in the main study. The basic instructions are contained in the following paragraph:

INSTRUCTIONS

"The purpose of this study is to find out the impression that people have of college women who are preparing for various occupational goals, by having them judge college women with the occupational goals against a series of descriptive scales. In taking this test, please make your judgments on the basis of what you feel about college women who would be going into these occupations. On each page of this booklet you will find a different occupation to be judged and beneath it a set of scales. You are to rate the college women who would be going into this occupation on each of these scales in order."

The various occupational goals were then signaled to the respondent in the heading that was paired with the occupational title on each page of the women's occupation questionnaire as illustrated by a sample page in Appendix A. The three different sets are as follows:

(1) A co-ed majoring in or otherwise training as a
Home Economist
as a full-time career.

(2) A co-ed majoring in or otherwise training as an
Actress
as an interim career, i.e., as something to do as a career until she is fully involved with her marriage and family.

(3) A co-ed majoring in or otherwise training as a
Nurse
as a career to be followed when her children are grown, i.e., a delayed career goal.

For convenience these are referred to respectively as full-time career, interim career, and delayed career instructions. The mean scale values obtained for the 15 occupations on all scales for each of these three forms of the basic women's questionnaire were compared. In other words, all combinations of the three questionnaires were compared across all occupations and items. Inspection of the results indicated that the number of significant differences between the forms of the questionnaire did not exceed that which could be expected by chance. On the basis of this comparison the subjects responding to the three different forms of the questionnaire were pooled for other analyses. No distinction will be made between the responses to the three forms in the remaining discussions in this chapter, just as no notice will be taken of the four differing institutions from which the samples were drawn.

Three important observations emerged from the methodological analyses of these data. First, there was sufficient similarity among the responses obtained from students at the four schools so that they can be pooled for the purposes of a general study of the perception of women in occupations. However, there were some significant differences between the profiles of occupations produced by students at the four schools. These merit study and discussion which must be deferred to another report. Second, the degree to which college women intend to become involved in the occupational world did not materially effect the perception of women's occupations. When women were evaluated as potential full-time participants in the occupational world they were perceived in the same way as other women being evaluated as either interim participants in occupations until their family responsibilities took them away from their jobs or as delayed participants in the occupational world following marriage and family commitments. Apparently, the occupational image was the dominant influence rather than the degree to which a woman would be involved in it. For example, the image of the nurse was not affected by the degree to which a woman planned to participate in nursing as a career after college training. The nurse was a stable and unchanging image which gave its aura and characteristics to all women who became associated with the profession whether they were active or inactive at a given time, whether they were now fully committed to it or trained but not intending to participate in nursing for a long period of time. Professional training seems to be a stable and long-enduring characteristic which in the case of women need not be activated at any given time to have an important impact on the way in which they are perceived by others. The third observation stemmed from the wording of the questionnaire instructions. The main questionnaire asked for judgments about occupations when men were questioned. Women in turn were asked to describe occupations as they involved men. In the Women's Study the focus was shifted to the rating of college women with certain occupational goals. This choice was made so that the occupational evaluations would be in terms of a familiar population, that of their peers, rather than in terms of some distant and unknown group of women doctors, actresses, and other women in the occupational world. An earlier study had indicated that college men with occupational goals were perceived in the same way as men in these occupations. On the basis of this earlier finding, it was deemed appropriate to talk about college women preparing for careers with the expectation that very little difference in the images would be contributed by this qualification. The data to be presented later in this chapter support the inference that judging women's occupations and college women with occupational goals is essentially the same judgment. The occupation is the dominant stereotype and determines the perception of the person entering the field to a very high degree. The evidence that has been gathered in the course of the Occupations Project indicates that in the absence of other data women and men in college with occupational goals are perceived in the same way as adults in these occupations, or as the occupation titles in the abstract.

Six Occupations Entered by Men and Women

One of the questions that can be answered with these data is whether occupations are perceived in the same way when either men or women are their occupants. Six of the occupations were rated under both conditions, and it is possible to compare the ratings obtained from the two questionnaires to determine the effects of the participants on the perception of occupations. This question tests the power of the occupational stereotype to maintain its pattern of scale scores whether or not men and women are in the field. Given the great stability that has been observed in the images in previous studies, it is reasonable to predict that they will maintain their stability even under these difficult conditions. It is also important to know whether a woman approaching the occupational world will experience special expectations that will modify the occupational setting for her, or whether she is expected to fit into the same rigid occupational criteria that are established for men entering the field. Does the occupational image make allowances for women and adapt to their special needs? In order to obtain answers to these questions, the images of occupation as they involved men produced by 492 women at eastern private and public universities were compared with the images as they involved college women developed by the 229 women in the Women's Study sample. The means scale values on the 17 scales common to the two forms were compared for each of the six occupations. Table 51 presents the correlations obtained in the comparison of the six occupations on 17 scales. The high correlations obtained indicated that occupational images were stable whether they were being perceived as occupations for men or for women. This is another instance of the high degree of consistency and agreement within the data on occupational images. When an occupation admits both men and women it remains basically unchanged as an influence on judgments about the nature of people who enter it. If the image of an occupation for men is known, it is probable that this image transfers to women as well with relatively modest adjustments. It should also be noted that these occupational images overcame not only the effects of male and female differences, but also they showed the power of the occupational image to maintain its quality regardless of context. That is, each of these occupations was in the context of nine occupations that were different from those in the reference set. Nevertheless, each image maintained its specific quality despite the contextual difference and the effects of being rated on a variety of new scales. The images of the artist, doctor, and social worker were stable in the context of other occupations and against the test of being entered by either men or women.

There were some interesting effects brought about by changing the sex of occupations, but they were minor differences in the context of great consistency. These differences were important and should be examined, but they should not be permitted to obscure the similarity of the images when either men or women are projected into the occupations. Two of the images showed the

Table 51

WOMEN'S STUDY

CORRELATIONS BETWEEN IMAGES OF SIX OCCUPATIONS AS THEY INVOLVE WOMEN AND MEN

Occupation	Correlation (r)[a]
Artist	.98[b]
College Professor	.83
Doctor	.80
School Teacher	.85
Scientist	.87
Social Worker	.87

[a] Women rating occupations for men on 17 scales (N = 492) were compared with women rating occupations for college women on 17 scales (N = 229).

[b] The low variation in scale scores within the profiles lowers the correlations for all occupations except artist. The scales chosen, and the high standing of this set of occupations on the scales, also lead to some high correlations between distinctive occupations in this comparison.

most marked differences when men and women were contrasted as occupational participants. Both artist and scientist were influenced by the differences between the sexes in a way that was quite intelligible. The woman artist is a less extreme figure than the male artist. The woman in this role was perceived as being less excitable, rash, depressed, radical, emotionally disturbed, and individualistic. The woman artist was also seen as less sensitive and self-assertive. She was further characterized as lower in intelligence and receiving less personal satisfaction from her role. The woman artist is a less volatile and extreme personality than a man in the same occupational position. Very likely, this role is seen as a reasonable career choice for a reasonably normal woman. On the other hand, it is viewed as an extreme choice for a man, who must be driven by an excessive need to express emotion and feeling to become involved in this uncharacteristically masculine calling. It is also likely that the image of the male artist conjures up the painter or sculptor rebelling against society and trying to force his own views of reality upon an unwilling public. A woman artist, on the other hand, is more likely to be perceived in commercial art, illustration, and other pursuits which represent less rebelliousness and a more reasonable adjustment to normal patterns of behavior. The woman also exerts a moderating effect on the image of the scientist. The woman scientist was rated less excitable, conservative, and individualistic than the male scientist. On the other hand, the woman scientist was accorded higher scores on confident and responsible by college students. These changes are not numerous but they suggest that a stronger and more controlled personality is associated with the woman who has the courage and determination to become a scientist as compared with the more impulsive qualities attributed to the men in science.

The other four occupations common to the two lists did not show notable changes. The woman who chooses college teaching was, in comparison with her male counterpart, less individualistic and radical, and also less sensitive and excitable. She does not have quite the same colorful and emotionally expressive qualities of the male college professor, but she bears a very strong resemblance to him in other respects. The woman doctor was less sociable but more individualistic than the man who entered this field. School teaching attracted a more cheerful and conservative but less intelligent woman than the man who was attracted to the same calling. A woman social worker differed from a male in social work only in that she was more conservative and cautious. These very small differences between men and women in college teaching, medicine, school teaching, and social work point to the relatively small interaction effect between the image of an occupation and the sex of its occupants. It is worth looking for a moment at the scale changes which appeared when the images of occupations involving both men and women were compared. The following tendencies could be discerned. Women were perceived generally as more calm and cheerful than men in the same occupations. On the other hand, men experienced greater personal satisfaction in each of the occupations, and they were rated as more sensitive than women in all of the comparisons. These may be perceived differences in male and female style in the occupational world. There is not enough evidence in this study to test this possibility. However, the according of greater personal satisfaction to men is quite consistent with a view that men experience few conflicts in the occupational world, whereas women must always be in a situation where there is potential conflict between the traditional woman's role and that of the working woman. This, in itself, may rob the woman of some of the satisfaction which would be hers, if the role conflict were not present.

Profiles of Occupations for Women

Descriptions have been presented in Chapter V of the profiles of occupations for men. In a statistical sense, it is very difficult to justify this kind of summarization of data in a subjective and intellectually coherent way. Nevertheless, in order to make it possible for a reader to quickly grasp the meaning of the data, it is desirable to provide information in a brief and intelligible form. The reassurance that has been offered in the past is that the reader is free to turn to the data and create a series of profiles for himself which represents a more satisfying interpretation for him than that which is provided here. Recognizing the difficulty and danger of attempting to interpret many numbers in a coherent manner, a series of short portraits of some of the occupations entered by women are presented below. An attempt has been made to capture in words the flavor of the ratings of each occupation in terms of the internal ordering of the scales. In addition, careful attention has been given to the range of scores assigned to the entire group of occupations so that the relative position of the value on any scale for a particular occupation is taken into account. The occupations that will be presented represent a selection from the total set that was studied. Because of the length of this report, only seven profiles will be described out of the 15 that have been studied.

Actress.--The expressive occupations which include actress, artist, and journalist will be represented by actress. The woman artist has already been described as very similar to the male artist, who was portrayed earlier in the report. The actress projects one of the most interesting and exciting images that has yet been studied. She combines qualities not found in any of the men's occupations presenting a new perspective on the range of occupational profiles that can be conceptualized. In a brief statement, the actress is glamorous, flashy, and at the same time insubstantial, superficial, with a veneer of personality. There is a great show of action in the image of the actress combined with very little stability and depth. The actress is rated extremely high on such qualities as attractive to men, dates a lot, active in extra-curricular affairs, sociable, and extraverted. The actress is seen by students as both a social climber and a person who is highly upward mobile. At the same time the actress is viewed as sensitive and individualistic. These attributes are coupled with a wide range of negative connotations which give added interest to the total profile. The actress is rated lowest of all occupations for women in intelligence, wisdom, and academic success. She is seen as extremely excitable, rash, unrealistic about life, irresponsible, and radical. In relation to other people the actress is selfish, indifferent, attention-demanding, with very limited interests in the world and a high degree of narrow-mindedness. These qualities are underlined by a high score on emotional disturbance, depression, and unsureness about herself. The actress earns a middle range of values only on the material success scales by being moderately well-to-do, middle class in social location, having a modest occupational goal, and achieving a reasonable level of personal satisfaction. These scale values generate a picture of the attractive, glamorous, exciting actress who is lacking in intellectual power, emotional control, personal commitment to others, and stability. From the point of view of the male student, he might date an actress but very likely would not wish to marry one. From the point of view of a co-ed, she might value public association with the actress but would have grave reservations about a close personal friendship. The publicity director's attempt to give the actress a moment of brilliance seems to have succeeded admirably. She has been cast in a role to which few modern young women can be attracted. The rewards of outward attractiveness are balanced too heavily by the penalty of inner chaos.

Scientist.--The high status professions are represented by college professor, doctor, and scientist. Since woman scientist shows some interesting characteristics when men and women in occupations are compared, it is desirable to expand on this image as a representative of a high status profession and as an interesting woman's profile. The outstanding feature of the woman scientist is similar to that noted in the male scientist. She is rated as very intelligent, wise, and academically successful; she experiences great personal satisfaction in her profession; her occupational goal is high; and she is a confirmed individualist. The woman scientist is reported to be responsible and self-sufficient. In socio-economic terms she is well-to-do and a member of the upper classes. As with the male scientist, these positive aspects of the woman scientist are set-off against some rather negative properties. The woman scientist is perceived as unsociable, lacking in cheerfulness, inactive in extra-curricular activities; she is believed not to date, to be unattractive to men, to be intraverted, and to lack understanding of other people. The woman scientist is neither well-rounded, nor refined. The inability to relate meaningfully to people which is a flaw in the image of the male scientist appears in the image of the female scientist. On a number of important scales the female scientist has scores in the intermediate ranges. She is reasonably calm, cautious, and has a relatively controlled emotional life. The woman scientist is perceived as relatively unselfish, sensitive, confident, conservative, self-assertive, and realistic about life. All of these are characteristics that have to do with coping effectively with reality. She is rated as worldly and poised, although not an unusual degree. The woman scientist is interested in the world of affairs and has an open mind when approaching new questions. In short, intellectual power and great integrity are coupled with social ineptitude in the female scientist image. It is as if the entire cathexis of the scientist is focused upon the life of the mind and the central concerns of her profession. The scientist is aided by a reasonably calm inner life, while she is absorbed in objective problems of research and the mastery of the physical world. The woman scientist is probably more reality-oriented than her male counterpart, and less inclined to become involved in extreme social and political activities. She is closer to the laboratory; more deeply involved in what might be called practical research than a man in a similar role.

Librarian.--The lower status professions, librarian, school teacher, social worker and home economist, are represented here by two occupations. Both librarian and school teacher are frequently chosen as careers by college women. Therefore, an effort has been made to give a reasonable picture of their status in the occupational image structure. The librarian emerges as one of the least prepossessing portraits to appear in the entire series which has been reported. The librarian has been referred to as a female accountant by a colleague familiar with the profiles that were reported earlier. The outstanding characteristics of the librarian turn out almost entirely to be negative features. She is neither well-to-do, nor a person with much occupational opportunity. Her origins, according to students, are likely to be from the lower classes, and she does not experience any marked personal satisfaction in her work. The librarian is unattractive to men, does not date, and does not take part in extra-curricular activities. She is neither sociable nor extraverted. The terms, submissive, uncertain, and unrealistic about life, are associated with the librarian. She is also considered to be narrow-minded and not well-rounded. In addition, the librarian is prey to emotional problems, probably stemming from the constellation of negative properties which have already been described. The woman librarian is perceived to be cautious, conservative, and naive in the extreme. There emerges from this series of student responses the picture of an unhappy and limited person who is withdrawn from the world as much as possible. The librarian's scores on intelligence, wisdom, sensitivity, and academic success are in the middle range of occupation scores, indicating modest attainments in this important intellectual area. There seems little in the portrait of the librarian that is attractive to anyone but a person seeking to avoid meaningful human contact by selecting work which protects him from this kind of threatening experience.

School Teacher.--This occupation has the fortunate property of receiving either high or middle range scores on all of the scales. She is perceived as very unselfish, cheerful, refined, well-rounded, and interested in the world of affairs. On all other scales the school teacher rates middle range values, which means that she is moderately intelligent, successful, sociable, and conservative; she experiences a reasonable amount of personal emotional control, and she has strength and confidence in respectable quantities. Academically the school teacher is successful; she is sophisticated, but not too much so, and she has an active and attractive relationship with men, but it is not extreme. When these observations are coupled with the realization that school teacher is according to men among the most attractive of all occupations for a wife, an interesting inference can be made. That occupation for a wife which is among if not the most attractive to men is the occupation which does not include extreme scores on any but very mild qualities like cheerfulness and unselfishness. This confirms what women have long suggested; that men are intimidated by women who are too intelligent, too beautiful, too emotional, or too challenging; that the best way to attract a husband is to play down extreme qualities and attempt to project a picture of moderate accomplishments in all areas along with a pleasant personality.

The very intelligent girl dares not earn the grades of which she is capable, nor is the very witty girl encouraged to indulge her talents in conversation. These results seem to confirm, in an interesting way, that which women have so long claimed is a weakness on the part of men.

Executive Secretary.--There is a striking similarity between the secretary and the school teacher in that both of them are primarily located in the middle range of occupation scale scores. However, those scales on which the secretary is very high define a different orientation from that of the school teacher. The secretary is believed to be very attractive to men, active in college dating, and quite sociable. She is seen as somewhat of a social climber and a person of considerable poise and refinement. At the other extreme, the executive secretary is perceived as a conformist with limited sensitivity, and a person who derives a rather low level of personal satisfaction from her work. Whereas the school teacher is portrayed as the all-American girl in her positive characteristics, the executive secretary comes through more as a glamorous and exciting figure. She has a polished, almost manikin-like quality which is balanced by the negative properties of conformity and insensitivity that may be derived by association from the unfavorable features of the business world. The secretary, however, does avoid most of the extreme attributes which seem to be negative indicators to men in search of wives.

Nurse.--Very few occupations have attained the fine combination of personal and psychological characteristics that are associated with the nurse. She is seen as highly unselfish, very cheerful, calm, cautious, and conservative. These features are coupled with confidence, self-sufficiency, realism about life, responsibility, and an absence of emotional difficulties. The nurse finds great satisfaction in her work. She is seen as a well-rounded person, extraverted, and understanding of others. Basically, the nurse is a person of great personal strength and control dedicated almost totally to the well-being of other people and who has the ability to inspire confidence and good feeling. The nurse is moderately attractive to men, and moderately active in the social world. She is rated as reasonably intelligent, and she attains a modest level of success. This combination of qualities creates a strong, warm, supportive personality portrait that should be extremely attractive to those who have experienced a calling in this direction.

Home and Family Career.--The final occupational title that was examined is not an occupation, but rather the alternative of home and family career without a job. This is such an important point of departure in understanding women that it was included in the array of alternatives to provide perspective on the active occupational choices that women could make. The future homemaker is very active in extra-curricular activities and the dating game. It is only in these two characteristics, which bring her in close touch with men, that she attains noticeably high scores. In the area of intelligence, academic success, and interest in the world of affairs, the homemaker is rated very low indeed. On some interesting scales connoting independence she also attains low scores. She is neither competent, self-assertive, nor self-sufficient. The future mother and wife is a conformist and an intravert. In status terms she is not upward mobile nor is she a social climber. Apparently, aspiring to a home and family is not associated with seeking to attain a higher status in the world. In other personal qualities, the future wife and mother attains medium values that group her with a number of career alternatives of rather different qualities. There is a dependent and passive tone to this career choice which is not negative, but which distinguishes it from all others.

The occupational alternatives for women are as rich and varied as those for men. These profiles are clues to the value orientations of students and the complicated choices that they face as they approach the occupational world. In choosing any of these occupations, women choose a personality, a series of associations, and a style of life that inevitably must have positive and negative attributes to which, often with great effort, they must adapt.

Marriage and the Choice of Occupations

Further understanding of the occupational world involving women can be obtained by studying both ideal occupational choices and an additional set of scales included in this study concerned with women's occupations as they relate to marriage. A version of the standard like-to-be scales were presented to women asking them to, "Rate each of the following occupational positions according to how much YOU would like to enter it as a full-time career IF you were free to make the choice without regard for training, ability, or time and expense required for specialized study. In other words, rate each occupational position in terms of how much YOU would like to be in it as a full-time career if you could be in any occupation you wanted." The delayed career and interim career themes were continued in the like-to-be page; therefore, in an alternative to the above instructions, the words delayed career, or interim career, were substituted for full-time career. A second page asking women to rate occupations in a different way, called the like-to-marry page for short, was also given to each of the college women. The following instructions were associated with this page: "Rate each of the following occupational goals of a college woman according to how much you think college men would like their wives to enter it as a full-time career IF the women were free to make the choice without regard for training, ability, or time and expense required for specialized study. In other words, rate each occupational position in terms of how much you think college men would like their wives to be in it as a full-time career if they could be in any occupation they wanted." Here, too, the delayed career and interim career options were used in the appropriate forms of the questionnaire. In these two forms women were asked to indicate first, the careers which they would most like to enter all other things being equal, and second, their judgment about the careers that college men would like their wives to enter if all things were equal. Finally, the tables were turned on the women by obtaining the opinions of college men about ideal careers for their future wives. The following instructions were designed for use with men involved in the Women's Study: "Think about or imagine the women whom you might wish to marry. Rate each of the following occupational positions according to how much it would please you as a full-time career for the woman you might wish to marry if she were free to make the choice without regard for training, ability, or time and expense required for specialized study. In other words, rate each occupational position in terms of how much it would please you as a full-time career for the woman you might wish to marry if she could be in any occupation." Again, the delayed career and interim career phraseology was used with the appropriate forms. With this latter question it was possible to check women's views about the attractiveness of occupations for wives with men's expressed preferences for wive's occupations. It should be pointed out that all three forms, full-time career, delayed career, and interim career, were pooled for the purposes of analysis. A careful examination of combinations of each of the pairs of forms on each of the three like-to-be and like-to-marry sets indicated that the three forms of the questionnaire did not differ significantly in any of the sets.

In the left-hand column of Table 52 the mean scores of women on ideal occupational preferences are presented. Home and family career (no job) received the highest average rating of all the career alternatives. This was followed by the service-oriented professions of school teacher and social worker. The

Table 52

WOMEN'S STUDY

MEAN VALUES AND RANKS OF (1) FEMALE LIKE-TO-BE SCALE AND (2) MALE LIKE-TO-MARRY SCALE

Occupation	Female Like-to-Be Score (N = 229)	Rank Order	Male Like-to-Marry Score (N = 196)	Rank Order
Home and Family	2.36	1	4.47	14
School Teacher	2.83	2	2.26	1
Social Worker	3.13	3	3.42	4
College Professor	3.77	4	3.87	7
Artist	3.80	5	4.10	12
Executive Secretary	3.86	6	3.71	5
Doctor	3.97	7	3.98	9
Retail Buyer	3.99	8	4.03	10
Nurse	4.16	9	3.02	2
Journalist	4.23	10	3.88	8
Home Economist	4.61	11	3.07	3
Scientist	4.62	12	4.33	13
Laboratory Technician	4.63	13	3.71	5
Actress	4.73	14	5.54	15
Librarian	5.29	15	4.04	11

college professor showed a degree of popularity with women which was similar to that found for men. Doctor was somewhat lower in rank order than it was in the male hierarchy of choices, but it still retained a respectable position. The librarian rated remarkably low in the set, and confirmed the impression inferred from the profile that librarian and accountant had similar implications within the female and male occupational worlds, respectively. Actress was apparently a source of considerable negative value as a possible personal career choice. Artist, on the other hand, rated high for women for whom it was an acceptable career alternative in the arts. The very strong choice of home and family career implying the rejection of a job came as something of a surprise in the scores of women students. Since this is an ideal conception scale, it should uncover underlying sentiments that are important for understanding the psychology of the group. This score suggested that many young women would prefer most of all to turn their college degree immediately to marriage and the raising of a family, and only secondarily would they like to become involved in a professional career. Should a career be thrust upon them, then school teaching and social work are by far the most acceptable alternatives, followed by artist, executive secretary, doctor, and retail buyer. From this point onward the choices become less and less attractive, with the likelihood that only a small number of young women will be attracted in these alternative career directions. Young women appear to be saying that they would prefer to settle on the rather dependent role of the housewife or devote their time to serving others, rather than choosing the more glamorous and demanding professions even in an ideal choice situation. Men, of course, are not nearly so conservative in that they choose the glamorous, demanding, and rewarding professions in their fantasy system, relegating the business and some service occupations to a low position on their list of choices.

The right-hand columns of Table 52 list the responses of men concerning ideal careers for the women they would like to marry. The results in this table are not striking, but there are a couple of surprising and interesting differences between the ideal preferences of women and the marital notions of men. The first finding which is most difficult to interpret was the discovery that men preferred to marry school teachers first, nurses second, followed by home economists, social workers, laboratory technicians, and executive secretaries, in that order. Fourteenth on the men's list of choices is the home and family career woman; and she is outranked in unattractiveness only by the actress, who earns a remarkably low score. These data say rather unequivocally that men prefer that a woman should have a career training and probably the insurance that goes with a profession. Men choose most frequently for their ideal service-oriented occupations which are not terribly demanding upon the time and energy of the woman and represent a positive contribution to society in a direct and personal way. Men are reluctant to look forward to a wife whose only career plan is to make a home and raise a family. They would far prefer to marry a woman with professional training and commitments, even of a very demanding and time-consuming nature, rather than have a wife who is totally dependent on them or chance for her maintenance and future. It is abundantly clear that the desires of women and the expectations of men are not in agreement on the fundamental attractiveness of a woman who is committed basically to being a homemaker. The data presented in Table 53 serve to underscore the disagreement between men and women on this fundamental point. In this table the men's like-to-marry scores are listed in the left-hand column and women's perceptions of men's like-to-marry scores are listed on the right. These two sets of scores indicated a very high level of agreement between the descriptions of men about their own marital sentiments and the perception of women as to how men felt about the occupational world for women. One sharp discrepancy was evident in the fact that women over-estimate by an overwhelming degree the desirability of the homemaker as the ideal wife for the average male college student. This is a fundamental disagreement in perception between men and women about the attractiveness and desirability of the girl who has prepared herself exclusively for the role of mother and homemaker. Probably no other finding in this entire body of data shows such a sharp disagreement between two related groups of people over an important point within the occupational world. This suggests that there is a danger that women, in many cases, believe that they are preparing in the most desirable way to please their future husbands when, in fact, they are misjudging the interest of men in marrying women with professional training. Men express a high regard for women who are capable of maintaining professional careers either permanently or at some time during their lifetimes, and who have the security of being able to go to work should some disaster befall the family.

This brief report of the Women's Study only touches upon some of the analyses that reveal the structure of this body of data. Much remains to be written about the cognitive patterns of women's responses to occupations, the details of occupational images for women, the impact of demographic variables on women's occupations, and the differential view of women's occupations held by women and men. In the space available here a short discussion of the images of women's occupations has been developed, both in terms of occupations shared by women and men as well as occupations in which women are predominant in numbers. The ideal

Table 53

WOMEN'S STUDY

MEAN VALUES AND RANKS OF (1) MALE LIKE-TO-MARRY SCALE AND (2) FEMALE ESTIMATE OF MALE LIKE-TO-MARRY SCALE

Occupation	Male Like-to-Marry Score (N = 196)	Rank Order	Female Like-to-Marry Score (N = 229)	Rank Order
School Teacher	2.26	1	1.53	2
Nurse	3.02	2	2.16	4
Home Economist	3.07	3	1.97	3
Social Worker	3.42	4	2.52	6
Executive Secretary	3.71	5	2.42	5
Laboratory Technician	3.71	5	2.98	8
College Professor	3.87	7	3.73	12
Journalist	3.88	8	3.29	10
Doctor	3.98	9	4.26	13
Retail Buyer	4.03	10	3.15	9
Librarian	4.04	11	2.91	7
Artist	4.10	12	3.29	10
Scientist	4.33	13	4.81	14
Home and Family	4.47	14	1.36	1
Actress	5.54	15	5.68	15

occupation preference analysis was introduced in several forms, and brought to light a puzzling discrepancy in the views of men and women on the importance of preparation for a specific occupation on the part of college women. A detailed development of these data will have to await a less restricted setting.

Chapter XI

THE OCCUPATIONAL IMAGES HELD BY HIGH SCHOOL STUDENTS

The Development of Images

The consistency and stability of the images of occupations held by college students naturally directed attention toward groups which might contribute differing images. The testing of a sample of graduate students and another sample of college faculty members reported in other chapters reflected in part this concern. High school students are one of the most interesting groups of young people that is directly related to college students and which might hold a different set of images. Therefore, a design was incorporated in this expanded study to determine the images of occupations held by a broad sampling of high school students.

There were three different but related concerns that entered into the conceptualization of this specific study. First, it was important to determine whether the images of occupations take shape during the high school years, or whether they are already well established when students begin their course in secondary school. The stereotypes are so firm by the time students begin their eighteenth or nineteenth year that it was clear their origins would have to be sought in the high school years, if not earlier. It was not possible with the occupations questionnaire or any reasonable variation of it to test much earlier than the tenth grade, so the study was limited to high school students in the tenth and twelfth grades. It was anticipated that evidence would be found of a developing set of images which would show a pattern of increasing organization and stability progressing from tenth grade students through twelfth graders to undergraduate college students. The cultural experiences, patterns of social interchange, and classroom activities of the high school should form a constellation of influences shaping occupational images during the teenage period. A central aim of the study was to learn as much as possible about the development of occupational images during high school. A second goal of the high school study was to obtain a broader sampling of respondents than was possible in the college population. Since a far wider segment of society in socio-economic and cultural terms is served by the high schools, this investigation provided an excellent opportunity on a continuum with the college study to measure the shape of occupational stereotypes among a more heterogeneous population. Essentially, all of the important socio-economic strata that could be interviewed in a standard survey research design are represented in these high schools in significant numbers. The third purpose of studying a sample of high school students was to explore the effects of several variables which might have significance for the formation of occupational images. For example, schools were included in the sample to afford an assessment of the impact of rather different community environments on the images. Other important contributors to thinking about occupations such as plans for future education and career have much greater variability in this student population than in any college sample that is available.

The scope of the study that is described in this chapter is so large as to defy detailed reporting in a limited space. The number of respondents (1617), the range of schools extending from a metropolitan urban school to a small town rural community school, and the great variety of students all combine to force this chapter to give only a brief survey of the results of the investigation.

Procedure and Samples

Form A of the occupations questionnaire was adapted for use in this study. The questionnaire was shortened to ten occupations. Two different sets of ten titles were constructed and administered to random halves of the sampling units included in the study. These sets of ten occupations called high school sets A and B are presented in Table 54. Each high school student received a questionnaire that began with a special set of instructions that are reproduced in Appendix A. These were a variation on the standard college instructions designed to better suit the needs of high school students. Ten occupations pages were matched against the A-scales and two background data pages, one asking for personal information and a second containing the standard male like-to-be scales ended the questionnaire. The length of the occupation list was determined by pretest experience with the students, and the need to limit the time required to complete the questionnaire to one hour for the slowest high school students. It will be noted in Table 54 that all occupations in the standard reference set are included in either set A or B. Three occupations have been added to the set: physicist, actor, and dentist, in the interest of obtaining additional information about these occupations. As a check on the reliability of the occupation

Table 54

HIGH SCHOOL STUDY

SPECIAL SET OF OCCUPATION TITLES

Identifying No.	Name
	High School Set A
37	Actor
03	Business Executive
43	Dentist
05	Doctor
06	Engineer
07	Industrial Manager
10	Personnel Director
19	Physicist
11	Retail Store Manager
13	School Teacher
	High School Set B
01	Accountant
02	Artist
04	College Professor
05	Doctor
08	Lawyer
09	Office Supervisor
12	Sales Manager
13	School Teacher
14	Scientist
15	Social Worker

lists two occupations, doctor and school teacher, are contained in both sets A and B. An important background information question asked, "Do you intend to go to college after you graduate? ______
If so, what will be your major? ______________________________"
The student also was asked the occupation for which he expected to prepare, whether he intended to go to work after high school, and if so, what jobs was he considering. The final page in the questionnaire consisted of the ideal occupational choice scale for each of the 18 occupations contained in both sets A and B. Men and women were asked to rate these occupations in terms of how much they would like to enter them if they were free to make the choice. Women in the high school sample were not asked to estimate the desirability or attractiveness of occupations for high school men. The questionnaires were administered to high school students in classroom groups during regular school hours. Questionnaire administration was always handled by a member of the Occupations Project staff. Testing in a given high school was carried out in the shortest possible time, usually in one day so as to minimize the interaction among students about the content and intent of the questionnaire. A member of the staff explained the questionnaire in detail to the students and read through the instructions with them. The staff member remained in the classroom throughout the period and answered questions for individual students as they arose. The testing was uniformly successful in that full cooperation was obtained from students in all of the schools and virtually 100% of the questionnaires returned were usable and contributed to the data analysis.

Six high schools in southeastern Michigan were selected for inclusion in the study. These schools were chosen to represent a wide range of the characteristics of high schools that seemed relevant to the purposes of the study. The schools included: (1) a large metropolitan urban high school; (2) a large small city urban high school; (3) a large suburban high school; (4) a medium sized rural high school; and (5) two small city parochial high schools. Each of these schools had certain general characteristics that made it reasonably representative of the class of schools from which it was drawn. Information about the schools was obtained from education authorities in the area and members of the School of Education faculty at Oakland University. Each of the schools in the study was pre-selected as possessing certain desired features and then enlisted in the research activity. Tenth and twelfth grade male and female students were included in the study. Every effort was made to obtain a sampling of students which represented the distribution of students within the particular high school. Students were tested in their English classes which was the only course taken universally by students in each of these schools. An arrangement was worked out with each school administration to test students in English classes selected in proportion to the distribution of English classes by levels and characteristics within the school. The percentage of college preparatory, general, and business English classes tested in each school was proportional to the percentage of such classes in the English curriculum. A crude distribution of students into college preparatory and general classes is presented in Table 55 to give a sense of the distribution of students in these categories by class level in each of the schools. It should be noted that in the rural and the two parochial schools an exhaustive sample was drawn of tenth and twelfth grade students. The distribution of classes between college preparatory and general indicates with some accuracy the curricular emphases in the larger schools. The suburban school had a strong orientation to college preparatory courses and approximately 87% of its students planned to enter college. In the metropolitan urban high school the college preparatory courses amounted to only a fraction of the total teaching effort, although some 30% of the seniors in this school actually enter college and another 20% hoped to do so. The figures in the right hand section of Table 55 indicate the number of seniors tested at each of these schools and the approximate percentage of the total senior class that is represented by that number. An exact distribution of the class and sex of students in the study by high school is listed in Table 56. The aim of the study was to obtain approximately 100 students in each of the sampling units defined by class and sex at the three larger schools and an exhaustive sample of the students at the rural and parochial schools. There was no problem of nonrespondents in this study since all of the students were part of a captive audience and the testing achieved complete cooperation from the youngsters in their classrooms. In the opinion of the administrators of the questionnaire, all of the students at both of these grade levels were able to understand the instructions, evaluate the occupations, and interpret the scales with some sense of confidence. This does not say that their interpretation of the meaning of any of these aspects of the questionnaire was the same as that of the administrators or of college students. However, all the students appeared to have verbal capacities that permitted them to respond to the questionnaire with some confidence and quickness. As was mentioned earlier, the two occupation sets were distributed randomly to students in all of the samples. In the final tabulation, set A was completed by 796 students and set B by 821.

It was anticipated that these schools would enroll a rather different distribution of the population in socio-economic terms than the colleges which have been described. The accuracy

Table 55

HIGH SCHOOL STUDY

TYPES OF CLASSES AND SAMPLE PERCENTAGES BY SCHOOLS

	Number of		Senior Class	
High School	College Prep. Classes	General Classes	Number Tested	% of Seniors (Approx.)
Metropolitan Urban	4	12	216	45
Small City Urban	8	8	194	30
Suburban	10	5	202	40
Rural	(No Such Distinction)		71	100
Small City Parochial A	(No Such Distinction)		54	100
Small City Parochial B	(No Such Distinction)		41	100

Table 56

HIGH SCHOOL STUDY
CLASS AND SEX OF RESPONDENTS BY SCHOOL

High School
Number of Students Tested

Grade	Metropolitan Urban		Small City Urban		Suburban		Rural		Small City Parochial A		Small City Parochial B	
	M	F	M	F	M	F	M	F	M	F	M	F
12	123	93	83	111	100	102	35	36	23	31	15	26
10	119	104	112	88	100	100	58	43	19	36	27	33
Total	242	197	195	199	200	202	93	79	42	67	42	59

of this expectation is supported by Table 57 which classifies the students in each school in terms of the occupational status of their fathers. Men and women are combined in the table to give an estimate of the socio-economic status of the school populations. Except for the suburban high school, these schools have a preponderance of children of white and blue collar workers in their student bodies. It would be appropriate to present a more detailed analysis of students from the lower occupational levels, but for comparative purposes with the colleges it can be seen that a very different population has contributed to the scale scores on occupations that will be considered in this chapter. Although the metropolitan urban high school and the rural high school have similar characteristics in terms of the socio-economic distribution of their students, it is probable that there are rather different environmental pressures upon these two types of students that will lead to different responses on a variety to standard test instruments. In both cases the schools are educating primarily young people from homes of limited circumstances. The suburban high school, on the other hand, is located in a very wealthy suburb of the Detroit Metropolitan area and contains a substantial number of young people from homes of middle and high economic and cultural standing. These young people are drawn from the same family status range as the samples of college students, and their families are rather higher on average in occupational status than some of the public university samples mentioned earlier. Almost all these young people will attend college as have a large percentage of their parents. The goal of the study to sample students from a much wider range of family backgrounds than was possible in the college student population and to obtain samples of students from schools of different quality and apparent impact was attained, judging from several measures of the characteristics of students in each of the schools.

Comparison of High School and College Students

A key comparison in this study is between the images of occupations held by high school students and college students. This comparison ties the occupational views of high school students into the main body of data reported so far, and it gives an opportunity to examine any changes that occur between high school and college. At this point it is necessary to describe the general trends in the relations of high school and college occupational images. The first general inquiry compared a factor analysis of 240 high school students chosen as a random stratified

Table 57

HIGH SCHOOL STUDY

OCCUPATIONAL STATUS OF FATHERS OF HIGH SCHOOL STUDENTS

Occupational Status[a]	High Schools				
	Metro. Urban (N = 439) %	Small City Urban (N = 394) %	Suburban (N = 402) %	Rural (N = 172) %	Parochial Pooled (N = 210) %
A. High-Status Professional (Doctor, Lawyer, College Professor, etc.)	2	10	24	3	7
B. Lower-Status Professional (School Teacher, Pharmacist, Librarian)	3	3	2	1	1
C. High Managerial and Entrepreneurial (Executive Positions)	--	--	13	--	1
D. Middle Managerial and Entrepreneurial (Managers)	4	8	36	6	10

[a] The classification scheme is a modified form of the Warner, Meeker, and Eells (1949) Revised Scale for Rating Occupations.

Table 57--Continued

Occupational Status	High Schools				
	Metro. Urban (N = 439) %	Small City Urban (N = 394) %	Suburban (N = 402) %	Rural (N = 172) %	Parochial Pooled (N = 210) %
E. Lower Managerial and Small Enterprise	6	12	14	8	15
F. White and Blue-Collar Workers	74	61	10	77	63
G. Other, or Uncodeable	10	5	2	4	2

sample of the entire high school group with the 11 college and faculty sampling unit factor analyses reported in Chapter III. A manually supplemented varimax rotation was used to identify the same six factors in high school students' responses that were described for the college samples. Table 58 summarizes the correlations between the average factor loadings of the 11 groups and the high school loadings on the six main factors. These correlations indicate that a reasonable match was obtained between the two sets of factor loadings. In effect, the high school students responded to the occupation titles with the same dimensions of evaluation as college students; they shared in the same connotative system although not in precisely the same way. Careful examination of the high school factors showed that they were rather close to the pre-professional business administration and engineering factor patterns described in Chapter III. The high school students as a whole compared with liberal arts undergraduates had a different version of cultured intellect including in it less sensitivity and interest in art and greater caution and self-sufficiency.

In a second inquiry, eastern public university freshman and senior male liberal arts students were compared with all of the male public high school students who indicated an intention to attend college. The correlations of occupation means for these two groups over the 15 common occupations ranged from +.82 to +.95 with a median correlation of +.90. The mean number of scales per occupation that were significantly different was 14.0. These figures indicate that there was a marked but not qualitatively significant difference between the two populations. This order of difference is no greater than that reported between public and private university students within the samples described in Chapter VIII. When eastern public university freshman and senior liberal arts women were compared with the public high school girls in the tenth and twelfth grades who intended to attend college, the median correlation over the 15 occupations was +.86 and the mean number of significant differences per occupation was 15.3. The male and female differences in these analogous samples were of the same order of magnitude.

A careful analysis of the comparison of university men and public high school males who believe they will attend college reveals relatively large differences on some occupations and small differences on others. The largest difference between the two groups was on the engineer who was regarded very much more positively by the high school students than by college undergraduates. The high school students rated him significantly more favorably on 24 out of the 35 scales, and in particular they emphasized the cultured intellect and strong confidence of the engineer. For example, the college bound high school men in comparison with

Table 58

HIGH SCHOOL STUDY

CORRELATIONS OF FACTOR LOADINGS OF HIGH SCHOOL AND COLLEGE GROUPS ON SIX FACTORS

Factor	Correlation
A. Cultured Intellect	+.64
B. Material and Social Success	+.91
C. Cheerful Sociability	+.97
D. Personal Control	+.70
E. Strength and Confidence	+.72
F. Conservatism	+.87

college men indicated that the engineer was more intelligent, wise, sensitive, attuned to art, valuable, personally effective, unselfish, colorful, and satisfied in his work. The high school students also saw the engineer as stronger, harder, more confident, and more active than did their counterparts in college. The sociability and personal control of the engineer was also given greater weight by the high school students. In general, the engineer was perceived as a stronger, more colorful and more culturally established professional by the high school population. He has greater self-control, gets along better with people, and generally is a more central participant in the professional image for high school students than for their colleagues at the college level.

A second occupation which differentiated between high school and college students to a considerable degree was artist. In this case the college students perceived the artist more positively than the high school students. For college men compared with high school college bound men the artist was more intelligent, sensitive, individualistic, colorful, valuable, and achieved greater satisfaction in his work. He was also seen as more active, self-assertive and persevering in the strength and confidence dimension by the collegians. The high school youngsters in comparison with the college students gave higher ratings on wealth and personal control to the artist. For the high school men he is a somewhat cooler and calmer soul who fits a little more easily into the main stream of human events. The college students have chosen to emphasize the emotional and colorful qualities of the artist and at the same time to heighten the dark and depressive side of his nature.

Another important difference between high school and college students centered on the image of the school teacher. This discrepancy was not the result of one group holding the school teacher in greater esteem than the other, but rather each group had a distinctive perception of this occupation. The high school students perceived the school teacher as higher intellectually and much stronger and confident than their colleagues in college, while the college students were more impressed with his sensitivity, self-sufficiency, and level of personal satisfaction. The school teacher is a more masculine figure for the high school group and a more sensitive and female image for the college people. On two other occupations there were considerable discrepancies in images between the two groups of students. The high school students were impressed with the sociable attributes of the scientist who was noticeably lacking in this particular quality in the minds of college students. They did not make him a highly sociable person, but they did temper his standing on this factor in comparison with the college sample. In the case of the college professor there was a tendency for the high school group to award him generally higher scores than did the college population but no pattern emerged when the scales were analyzed on a dimensional basis.

Analysis of the use of scales by the high school college bound group and the college undergraduates indicated a small pattern on the part of the high school students to attribute higher scores on several scales to most occupations in comparison with the college group. For example, the high school students viewed most occupations as more unselfish, intelligent, valuable, wealthy, and active. In addition, all occupations were seen as wiser by the high school students. This pattern of scale use can be interpreted as a function of the reference points characteristic of high school students compared with the more sophisticated college population. On the whole, the shift in scale use was quite minor and could not account for the differences that emerged from the two group occupation comparisons. This analysis establishes the fact that college bound high school students see the world of occupations approximately the same way as public university students. The high school representatives are clearly more impressed with the engineer and less well disposed toward the artist than the college students. The school teacher is perceived quite differently when college and high school students are compared.

A second set of comparisons included the same public university group with a new sample composed of all of the male grade ten and twelve public high school students who indicated that they did not intend to go to college. When these two groups were compared, the range of correlations of occupation profiles was +.61 to +.88 with a median correlation of +.78. The mean number of significant differences per occupation was 15.7. The analogous comparison of public university women and high school girls who indicated they do not intend to go to college provided a median correlation of occupation scale patterns of +.75 and a mean number of significant differences per occupation of 18.0. In other words, there was a close similarity in the magnitude of differences between male and female non-college bound students and their undergraduate college counterparts.

Artist produced the largest difference between the non-college bound men and the male college undergraduates. The pattern of differences was similar to that found in the college bound comparison. The public university students gave the artist considerably higher scores on cultured intellectual scales such as individualistic, sensitive, interested in art, colorful, valuable, and attains personal satisfaction in his work. The high school students, on the other hand, attributed a much greater level of personal control to the artist by giving him higher scores on calmness, caution, realism about life, responsibility, lack of emotional problems, and happy home. It should be noted, however, that in this dimension which was highlighted by the high school students, the artist was among the least well endowed of all the occupations. The high school students also saw the artist as less poor and unsuccessful and less unsociable than the college contingent. The second occupation that distinguished between these two groups to a high degree was engineer. The non-college bound high school students had a favorable view of the engineer compared to college students. They placed him higher in cultured intellect with higher scores on unselfishness, wisdom, sensitivity, and interest in art. They also found him a more sociable person with stronger scores on attentive to people, cheerful and sociable. The high school people even believed that the engineer had a happier home life and a prettier wife. When the college professor was rated by the two groups, he was accorded a stronger position on cultured intellect by the college students, but generally higher scores on a number of other scales by the high school students. College professor received a stronger average rating from the high school students, and he earned a sharper and more clearly defined profile with greater emphasis on aesthetic and intellectual traits from the college students. Two business fields, personnel director and retail store manager, differentiated between the two groups and the differences that they exhibited were quite straight-forward. The high school students perceived both of these occupations as considerably stronger in cultured intellect than college students. The retail store manager, for example, was rated by high school men more active and strong and higher in cultured intellectual areas such as unselfish, wise, intelligent, individualistic, colorful, valuable, sensitive, interested in art, and receiving greater personal satisfaction from his work. Clearly this represented a different evaluation of business occupations on the part of the high school students. One occupation reversed the normal trend with the college students having a much stronger view of the doctor than the non-college bound high school group. College students gave higher scores to the doctor in cultured intellect, sociability, and strong confidence. Apparently the high school students did not quite accept the extreme evaluation of the doctor which is so characteristic of college undergraduates.

The scale use analysis of differences between high school non-college bound students and university students showed that high school students gave higher values on wise, unselfish, and active to most occupations and college students used positive scores on optimistic, persevering, and self-assertive more generally than their counterparts in high school. These terms did not form any particular pattern and could not account for the differences between occupations that have been reported. The trends observed in this comparison of non-college bound students with students already in college are continuous with those reported in the college bound high school and college student comparisons. There are a few more differences reported in the non-college bound analysis, but they are almost all consistent with the smaller level of differences observed in the college bound analysis.

In order to provide more perspective on the comparison between high school college bound and non-college bound students and the university student group, the ideal occupational preference scores for male students in each of these three categories are listed in Table 59. For the most part this table indicates the rather high level of agreement between high school and college students on the relative desirability of occupations. However, there are some important differences that merit attention. First, it should be noted that the engineer moved to the fore as the most attractive occupational opportunity for male students whether or not they plan to attend college. This occupation which was given higher scale values by both groups of male high school students was not only perceived more favorably by them but also chosen to a degree that would not have been predictable from the college data. Two occupations, the doctor and the college professor, are less attractive to high school students as possible occupational roles than they are to the college group. The most interesting differences are not in the comparison between public university and high school students but rather in the relations between both high school groups and college students. In general, the public university students and the college bound high school students have similar perceptions of the occupational world and its relevance for them. More is revealed by the distinction between non-college bound high school students and the other two groups in terms of attitudes and approaches to occupations. It is clear that those students who did not intend to go to college were not attracted at all by the symbol manipulating or intellectual occupations of school teacher and college professor. These occupations which have such great attractiveness for college students made no sense and apparently had no appeal for high school students who did not intend to pursue additional education. On the other hand, the non-college bound high school students clearly perceived such occupations as industrial manager, retail store manager, and sales manager as attractive and accessible from their

Table 59

HIGH SCHOOL STUDY

IDEAL OCCUPATION PREFERENCE SCORES (LIKE-TO-BE) FOR PUBLIC UNIVERSITY LIBERAL ARTS MALES, AND COLLEGE BOUND AND NON-COLLEGE BOUND PUBLIC HIGH SCHOOL MALES

Occupation	Public University Mean Like-to-Be Score (N = 257)	Rank Order	High School College Bound Mean Like-to-Be Score (N = 508)	Rank Order	High School Non-College Bound Mean Like-to-Be Score (N = 222)	Rank Order
Lawyer	2.70	1	2.88	2	3.69	5
Doctor	3.07	2	3.34	5	4.15	7
Business Executive	3.08	3	2.91	3	3.45	2
College Professor	3.09	4	4.18	8	5.17	14
Scientist	3.17	5	3.18	4	3.63	3
School Teacher	3.70	6	4.17	7	5.22	15
Engineer	3.93	7	2.80	1	2.42	1
Industrial Manager	3.94	8	4.00	6	3.50	4
Personnel Director	3.94	9	4.43	9	4.30	10
Artist	4.40	10	5.08	14	4.98	12
Sales Manager	4.61	11	4.62	11	4.19	8
Social Worker	4.75	12	5.10	15	4.67	11
Office Supervisor	4.77	13	4.49	10	4.23	9
Retail Store Manager	4.92	14	4.69	12	3.92	6
Accountant	4.96	15	4.85	13	5.03	13

vantage point. This is the only group of male students except for the pre-professional business administration students who have shown any attraction toward business related occupations. The accountant was not accorded a high position, but this is probably because he belongs with the symbol manipulators, college professor and school teacher, at the unattainable end of the continuum of occupational alternatives. It is interesting to note that scientist rated very high among these students and seemed to be grouped in a different category from the academic professions which were given such low scores. Both groups of high school students attributed a considerably more favorable image to the scientist than the comparison college group. The adjustments that the high school students made relative to college students in the images of the occupations were paralleled by their preference patterns, with the non-college bound students showing the sharpest deviations from the college norms in their ideal preference scores. Given the great difference in orientation toward ideal occupations on the part of the non-college bound high school students, it is interesting that their images of occupations did not differ from those of college students to a greater degree. It appears that objective evaluations of the characteristics of occupations are influenced but cannot be reshaped by their attractiveness as occupational alternatives.

Importance of Expectations About College Attendance

A series of analyses was conducted to determine the difference between the outlook of college bound high school students, students who plan to attend college, and non-college bound high school students. In the previous section this appeared to be an important dimension of the high school student population which deserved attention. All the students both male and female from the four public high schools were grouped into those who indicated that they intended to go to college and those who indicated that they did not. When these two groups were compared the median correlation of occupations over the 15 titles was +.94. The mean number of significant differences per occupation between the two groups was 14.1. These figures were computed over the 15 regular occupations that are included in the reference list. The three important occupation titles of actor, dentist, and physicist which were included in this study will be eliminated from the discussion for purposes of economy and clarity. The patterns that appeared in the analysis were quite intelligible in terms of those differences already discerned in the high school-college comparisons.

The two groups differed considerably in their perception of the artist. The non-college bound students saw the artist as essentially less poor and less the victim of a chaotic and uncontrolled emotional life. At the same time they rated him lower in artistic sensitivity and radical isolation. A second occupation which is perceived quite differently by the two groups is doctor. The college bound students had a much more favorable view of the doctor than their non-college bound colleagues. He was given high scores in strength and confidence and on such scales as personal satisfaction, individualism, personal effectiveness, and interest in art. His social status and power and his standing in the sociability dimension were elevated by the college bound students in comparison with the non-college bound group. The social worker also was perceived much more positively by the college bound than the non-college bound students. The college bound students gave higher scores to the social worker on the four dimensions of cultured intellect, sociability, personal control, and strong confidence. On the dimension of material and social success, the social worker was accorded a higher score by the non-college bound students. There is evidence that the social worker was perceived as a more interesting occupational opportunity by the college bound group who also saw greater economic limitations in the way of this particular occupation.

Two other images which differed for the college and non-college bound students were industrial manager and accountant. In both of these cases the non-college bound group attributed higher scores on several dimensions to the business occupations. The non-college bound students have an interesting resemblance to the pre-professional business administration students in these ratings. Both of these occupations were given less negative scores on cultured intellect, sociability, and material and social success. In neither case were they raised to the point of competition with the higher professionals, but their negative properties were greatly reduced when the non-college bound were compared with the college bound students. The school teacher also rated higher in the eyes of the college bound students compared with the non-college bound group. The pattern was almost identical with that of social worker, in that college bound students saw the school teacher as having higher standing in cultured intellect, sociability, and strength and confidence and also a lower rating in wealth, power, and socio-economic status. These two professional roles which will be open only to college bound students were judged quite differently by the two populations. The non-college bound students were more impressed with the wealth and status of the social worker and school teacher and perceived a good deal less of the rich and interesting personal qualities attaching to these roles.

For the non-college bound group these may be relatively undifferentiated or unclear occupational alternatives.

An analysis of the patterns of scale use brings to light the fact that the non-college bound students attributed higher scores to most occupations on the material and social success dimension. It is likely that from their perspective most occupations project a higher level of wealth and success than they do for students who are planning to go to college and compete for places in these occupations. The non-college bound students believe that the occupations which they will enter will almost all be less rewarding in wealth and status than those they are rating in this questionnaire. It is worth noting that a study of the variances of scale means on all occupations indicated that the non-college bound group is far more heterogeneous in its responses to these occupations than the college bound group. The college bound students have been selected in a manner that encourages a degree of response homogeneity which will continue to increase as those who are determined to go to college are actually selected out for college attendance.

The next stage in the analysis consisted of a separate exploration of the comparison between college bound and non-college bound students for the four public high schools. The mean number of significant differences per occupation for the high schools were as follows: (1) suburban high school, 2.33; (2) rural high school, 4.20; (3) small city urban high school, 5.33; and (4) metropolitan urban high school, 6.53. The smallest difference between college bound and non-college bound students occurred in the high status suburban high school, whereas the metropolitan urban high school contained the largest distinction between the college bound and non-college bound groups. Two important patterns within the college bound and non-college bound comparisons in these schools should be discussed. First, the doctor image was high in the magnitude of its differences between college bound and non-college bound groups in all schools. In every case the college bound students had a more favorable view of the doctor. He was rated higher on strong confidence at all schools, and on wealth and cultured intellect in addition at two schools. A second important occupation which differentiated between these two groups of students at all high schools was school teacher. The two city high schools showed sharp differences in the image of the school teacher for these two important categories of students. In all high schools the teacher was perceived by the college bound students as rating considerably higher on cultured intellect, strength and confidence, and sociability. At the city high schools, in addition, the wealth of the teacher was judged to be higher by the college bound students than the non-college bound comparison group. Particularly in the city schools the perception of the school teacher separated those students who were planning to go to college and those who were not. The dimension of identification with the teacher and the academic life may be emerging in this comparison. Those students intending to go on to college showed a rather strong identification with and favorable response to the teacher, whereas the non-college group had a less favorable impression of the occupation and the people in it.

Another analysis compared the college bound and non-college bound groups in each public high school with the average scores of the other three college bound or non-college bound groups. This was a device for determining whether a particular college bound or non-college bound groups deviated significantly from the average of the other schools in some observable direction. A pattern was found showing that the suburban high school college bound group held generally more favorable views of a number of occupations than the other three public school samples combined. On 8 out of 15 occupations the suburban college bound students recorded a significant number of favorable scale differences in comparison with the average of the other three groups. This particular group of students had the greatest likelihood of attending college and unusually good chances of completing their college degrees. In this high school, the college bound--non-college bound distinction was not as important as in the other schools. These students were all quite close to the higher occupational world and most were destined to participate in it. They knew and were very favorably disposed to this list of occupations.

The ideal occupation preference ranks for men and women combined in the college bound and non-college bound high school groups are presented in Table 60. Perhaps the most striking feature of this table is its high degree of consistency across four different public high schools. Only small differences appear in the general emphases of each school and in the college bound--non-college bound comparisons within each. For the metropolitan urban high school the accountant had an unaccountably high preference rating for non-college bound students. Within the rural sample the non-college bound students chose industrial manager to a degree not matched by the other schools. The only other ranks which seemed to be deviant were the favorable ratings of the artist at the suburban school which resembled the selection pattern of college students. Both doctor and school teacher were given higher ratings by suburban non-college bound students than by their colleagues elsewhere, while the retail store manager was

Table 60

HIGH SCHOOL STUDY

IDEAL OCCUPATION PREFERENCE RANKS (LIKE-TO-BE) FOR FOUR COLLEGE BOUND AND NON-COLLEGE BOUND HIGH SCHOOL GROUPS

	Rank Order of Preference							
	Metropolitan Urban		Small City Urban		Suburban		Rural	
Occupation	CB	NCB	CB	NCB	CB	NCB	CB	NCB
Accountant	12	6	15	14	15	13	11	11
Artist	13	14	10	12	9	9	15	14
Business Executive	2	1	4	1	2	5	2	2
College Professor	7	12	6	15	10	15	10	15
Doctor	3	10	5	6	3	4	4	9
Engineer	6	8	7	9	5	8	6	4
Industrial Manager	11	11	13	13	13	11	13	7
Lawyer	1	5	1	2	1	2	1	5
Office Supervisor	9	2	10	4	12	6	9	5
Personnel Director	10	3	9	5	7	3	8	2
Retail Store Manager	15	7	14	6	14	12	12	7
Sales Manager	14	9	12	8	11	7	14	10
School Teacher	5	15	2	11	6	10	5	13
Scientist	4	13	3	10	4	14	3	12
Social Worker	8	4	8	3	7	1	7	1

given a far less favorable ranking as an ideal occupation by the non-college bound suburban grouping. Basically, the agreement among college bound and non-college bound groups in the four schools is the most interesting feature of this important table.

To refine this analysis further a study was conducted on data from the metropolitan urban high school of the differences in occupational images of non-college bound senior students, seniors who said they intended to go to college but failed to do so (on the basis of an actual study of college attendance), and seniors who said they intended to enter college and actually did enroll in college for the freshman year, as revealed by a study of the record. The relatively small differences in occupational images revealed by comparisons of these three groups indicated a similar perception of occupations on the part of all three groups. There was no evidence that the college bound students who did not go to college were more like the college bound students who did go to college than the non-college bound students. The data seemed to indicate that the college bound who did not enter college fell just about midway between the other two groups in their occupational outlook. A study of the ideal occupational preference ranks of these three sub-groups confirmed the halfway position of the college bound students who did not make it to college. Table 61 presents the rank orders of occupational preferences for these three groups of high school students. On six of the occupations there was a clear continuum from the college bound group that entered college to the non-college bound group with the college bound group that was unable to go to college falling midway between. In the cases of the accountant, office supervisor, personnel director, and sales manager, the preference of non-college bound students for business occupations separated them from the other two groups. On the other hand, the trend in the case of college professor and scientist was for the college bound group to be very favorable and the other two groups to be quite unfavorable. In their perception of the doctor the "college bound but no college" group looked a good deal like the college bound population, and in their perception of the social worker they were somewhat more like the non-college bound population. On the basis of these data the college bound students who were going to college appeared to have a rather striking similarity to the students who were already enrolled in college. The college bound students who did not attend college fell in a halfway position looking in both directions--toward those who had no intention of going to college and those who intended and succeeded in attending college. It is clear that an expressed intention to go to college whether or not it is followed through by actual enrollment is an important determinant of the view a student will take of occupations and his ideal preference for them.

Table 61

HIGH SCHOOL STUDY

IDEAL OCCUPATION PREFERENCE RANKS (LIKE-TO-BE) FOR COLLEGE BOUND--ENTERED COLLEGE, COLLEGE BOUND--DID NOT ENTER COLLEGE, AND NON-COLLEGE BOUND STUDENTS; GRADE 12, METROPOLITAN HIGH SCHOOL

	Rank Order of Preference		
Occupation	College Bound Entered College (N = 48)	College Bound No College (N = 72)	Not College Bound (N = 96)
Accountant	15	11	6
Artist	13	12	14
Business Executive	5	2	1
College Professor	2	10	15
Doctor	3	4	10
Engineer	6	6	9
Industrial Manager	9	14	11
Lawyer	3	1	5
Office Supervisor	10	7	3
Personnel Director	11	9	2
Retail Store Manager	12	15	7
Sales Manager	14	12	7
School Teacher	7	2	13
Scientist	1	8	12
Social Worker	8	5	4

Comparison of Tenth and Twelfth Grade Students

A final important analysis compared tenth and twelfth grade male students from the suburban high school, the metropolitan urban high school, and the two parochial schools combined. Mean scale scores on all 15 occupations were compared in each of these schools. The mean number of significant differences per occupation was 2.67 at the parochial schools, 3.00 for the metropolitan high school, and 4.07 for the suburban high school. These differences are so small as to indicate that there was no major difference in perception between tenth and twelfth grade students on the images of occupations. The same outlook on occupations was held by students at both grade levels, and the images that were comparable to those of college students for the twelfth grade students would be comparable at about the same level of reliability for tenth graders. Images of occupations are formed prior to the tenth grade, and this cross-sectional evidence indicates that they do not undergo great change from the sophomore to senior year of high school. The only differences of any significance that were observed existed within the suburban high school where teacher and social worker were both regarded somewhat more favorably by tenth grade students.

A final presentation of ideal occupational preferences appears in Table 62 in which the tenth and twelfth grade ideal preference ranks are compared for each of the three schools. The purpose of this table is to indicate the remarkable degree of agreement between tenth and twelfth grade male students on the relative attractiveness of occupations within each of the three school populations. There are between school differences which can be observed from studying the table, but within school differences are very slight indeed and are probably explained by chance fluctuations in scale ratings. These data support the data presented on the comparison of mean scale scores of the occupations.

The basic approach to the data in this chapter has been to conduct analyses which cast additional light upon the images of occupations that have been analyzed exhaustively for college students. There are a number of internal analyses of the high school data which are not reported here and must be reserved for another context. The trend which has been noted is that there is a strong continuity between high school and college images of occupations. This continuity is strongest when college bound high school students are compared with college students and somewhat less pronounced when non-college bound high school students are compared with college undergraduates. Analysis of the college bound and

Table 62

HIGH SCHOOL STUDY

IDEAL OCCUPATION PREFERENCE RANKS (LIKE-TO-BE) FOR TENTH AND TWELFTH GRADE MALES FROM THREE HIGH SCHOOLS

	Rank Order of Preference					
	Metropolitan Urban		Suburban		Parochial Pooled	
Occupation	Grade 10 (N = 119)	Grade 12 (N = 123)	Grade 10 (N = 100)	Grade 12 (N = 100)	Grade 10 (N = 46)	Grade 12 (N = 38)
Accountant	14	12	13	15	14	13
Artist	15	15	10	9	15	15
Business Executive	3	2	3	1	2	2
College Professor	9	11	11	11	9	7
Doctor	6	5	4	4	3	6
Engineer	1	1	2	3	1	1
Industrial Manager	5	6	7	5	5	5
Lawyer	2	3	1	2	3	3
Office Supervisor	10	7	9	10	6	10
Personnel Director	7	9	8	7	9	10
Retail Store Manager	8	8	14	13	8	9
Sales Manager	12	13	6	8	11	14
School Teacher	11	10	12	12	12	8
Scientist	4	4	5	6	7	4
Social Worker	13	14	15	14	13	12

non-college bound student differences clarified to a certain extent the direction in the form of occupational images from the non-college bound through the college bound group to college undergraduates. Evidence was presented indicating that the college bound students were more favorably oriented toward the professions and intellectually oriented occupations while the non-college bound group had a stronger impression and response to the business oriented occupations. When the non-college bound--college bound analysis was focused on each of the schools separately, certain internal patterns emerged showing that there were differences between the schools on this dimension and probably on a number of others that merit attention. The suburban high school had characteristics which related it rather closely to the college population while the metropolitan urban high school was at the other extreme of attitudes toward occupations within this sample of schools. It was also found in the course of these analyses that college bound students who succeed in going to college are quite similar on several measures to students who are actually in college. College bound students who intended to go to college but did not succeed were intermediate and non-college bound students were at an extreme position compared with college students. These data contend that intention to go to college as a verbal expression is an important indicator of students' views toward occupations and probably a number of other college related matters. Considerably more analysis of this particular dimension of stated intention will be fruitful. Finally, it has been noted that there is almost no difference between tenth and twelfth grade students in their views of occupations. The formation of the images of occupations cannot be readily investigated with the type of research instrument that was central to this study. The images seem to be consistent through the high school years and most likely change relatively little by the time the student gets to college. The main thrust of these data indicate that images of occupations are formed and rather firm in the tenth grade and they differentiate between those students who are attracted to college and those who move outward from high school directly into a different occupational world. The fine structure of these images and their implications must wait for another opportunity to be reported in detail.

Chapter XII

CONCLUSIONS AND IMPLICATIONS

Conclusions

A major outcome of the Occupations Project has been the establishment of the existence and delineation of the form of a system of stereotypes shared by a sizable and important population. A significant segment of the college student body of the United States and probably most people who are related to college education share in the occupation stereotypes that have been described in this study. These stereotypes are much more than simple one-dimensional impressions of occupational titles; they are complex multi-dimensional responses to the occupational world that are agreed upon by a large number of people who have an important influence on the shape and quality of society. The range of participants in this system of stereotypes extends from high school students of 15 or 16 years through college undergraduates and graduate students to college faculty members. The consistency, stability, and complexity of this system indicates that it is deeply embedded in the American language and has important effects on American social behavior.

The studies of the prestige ranking of occupations which have been conducted periodically for the last thirty years established the stability of one dimension of this six-dimensional stereotype system. Both the anatomy of prestige itself as well as a series of additional dimensions of evaluation have been identified and described in this research. In order to understand the occupational world, it is vital to know the interrelations among the important dimensions of cultured intellect, prestige and status, sociability, personal control, strong confidence, and conservatism. The occupations arrange themselves along each of these dimensions in ways that are as interesting and consistent as their locations on the dimension of prestige alone. Occupations can only be understood in this multi-dimensional space in contrast with the rather simple-minded one-dimensional space that inspired previous discussions. The occupational world is organized in a complex system that influences the lives of both students and adults. A map has been presented in the course of this study which promises to be a reliable atlas to the occupational world. It places occupations on a series of coordinates that indicate how they are viewed by people and in turn how they influence the people who become involved with them. If stereotypes are to be dealt with effectively in any system of education or mass media manipulation, it is essential that the dimensions of the stereotyping be understood. Only in terms of the complex interrelationships among responses to occupations is it possible to conceive of ways of enlarging the public perception of occupations constructively in an effort to make alternative careers more accessible to potential members. This study has effectively charted the occupational world in the service of any future discussions about shifting and manipulating its contours to serve various practical and social ends.

In addition to confirming the consistency of occupational images the research was intended to obtain a better understanding of the development of the images of occupations. The study was less successful in attaining this goal for reasons almost beyond its scope. First, it was noted that changes in the images of occupations during four years of college are very small. A longitudinal study detected some interesting but relatively minor shifts in the perception of occupations during the four year period of college. The more significant attack on the problem of image development was contained in the High School Study. The results of this investigation indicated that the stereotypes of occupations held by high school students are firmly established by the time they enter the tenth grade. There are differences in images within the high school population, but these are related to the experiences and goals of students rather than to developmental trends in progress during high school. There is a clear continuity between tenth and twelfth grade students who are bound for college and college undergraduates in perceptions of the occupational world. In the judgment of the researchers the instrument that was used throughout this investigation could not be used effectively in those early years of elementary school where the occupational images must take definite shape. Therefore, it was deemed beyond the scope of the study to pursue further the issue of image development with the instruments and analytical techniques available. One conclusion of the study, then, is that images of occupations are formed in the elementary and at the latest, the junior high school period by a series of forces that are not clearly understood as a result of this investigation.

In the course of this second part of the Occupations Project the scope of the investigation was widened to include additional populations that were not sampled in the earlier work. Samples of pre-professional undergraduate students in business administration, engineering, and education were studied to determine the outlines of their impressions of the occupational world.

It was found that pre-professional students do not differ markedly in their views from the liberal arts student population that was the focus of the study in the beginning. They do have one notable deviation; they are committed strongly to that field for which they are training, and they hold an image of that field considerably more favorable than the image held by liberal arts students. They tend to raise the image of their profession on all scales and factors but, in particular, they strengthen it in the vital dimension of cultured intellect and on those other factors in which the occupation already has a high standing. There is a surprising lack of generalization of this inflationary factor in that it does not spread easily to occupations that are adjacent to the area in which the pre-professional is working. A group of graduate professional students in the field of osteopathy joined the pre-professional undergraduates in seeing their own discipline as unusually endowed with strong and glamorous qualities. The only group which departed from this trend was college faculty members who had a less favorable image of their own profession than did undergraduate students.

Another interesting focus of the study was upon the perception of the world of occupations for women by undergraduate students. This constituted an attempt to broaden the understanding of the images of occupations by investigating a new set of titles which are attaining increasing prominence. In general, it was found that occupational stereotypes are influenced only slightly when they are designated for women rather than for men. In keeping with the spirit of the civil rights movement women in specific occupations can expect to be perceived, other things being equal, just as men who are in or anticipating entry into those occupations. This may turn out to be an unflattering experience for the woman since it seems that she will be endowed with certain characteristics which are more inherent in the occupation than in her femininity, but it does suggest that equal rights for women are accorded at least in the occupational stereotypes of both men and women. There was one element in the study of women's occupations which remained unresolved in the course of this research. It was the discovery that the one non-occupation included in the set, home and family career, generated a remarkable discrepancy between the views of men and women. In brief, women indicated that an ideal occupational choice for them is a home and family career without an occupation, and they also perceived that men rate this alternative highest among all of the career alternatives available for their ideal wives. Turning to men, it is discovered that they rate home and family career as a very low choice for a potential wife compared with a whole range of occupational career alternatives. In effect, men believe that women should be prepared for a career as a result of their college education. Women on average prefer to avoid the occupational world and they project their desire to avoid the world of work on the expectations of prospective husbands. This degree of misunderstanding between men and women on such a crucial point is both puzzling and troubling, and merits additional investigation.

High school students were brought into the investigation in an effort to understand the development of occupational images. One of the primary findings to emerge from the study of high school student images of occupations was an interesting discrepancy between the views of the occupational world held by students who expressed an interest in attending college and those who had determined that they would not go to college. The difference between these two groups of students is well established in the tenth grade and persists in almost identical form to the twelfth grade. The group of students intending to go on to college share the propensity of liberal arts college students to be attracted toward the higher professions. On the other hand, the non-college bound high school students are partial to the range of business occupations that have been attractive only to pre-professional business students in the universities. Indeed, an interesting similarity on several dimensions of response appeared between business administration pre-professional students and high school students who had chosen not to continue on to college. Both their approach to the occupational world in a dimensional sense and their views about ideal occupational outcomes showed a degree of convergence which raised more questions than it solved.

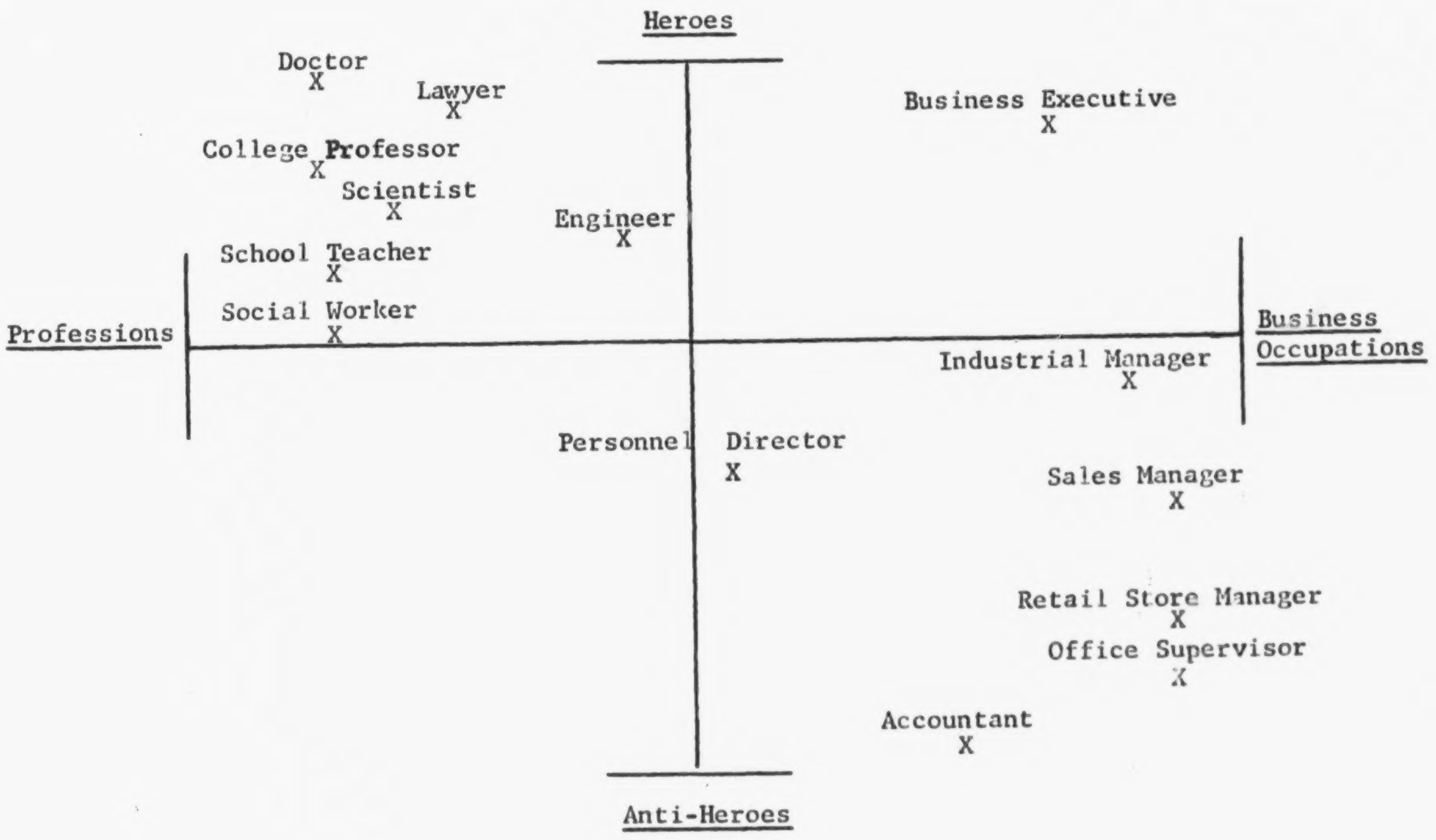
One of the strong patterns that runs through all of the data is a trend of several demographic factors to combine to give rise to a particular conception of occupations. In a number of group comparisons one of two groups gave consistently lower scores to all occupations on all scales. And, in addition, this group also used the cultured intellect scale rather differently. The scale was used with more discrimination in that one or a few occupations was given rather high scores on cultured intellect and others were given lower scores than by the comparison group. That is, the cultured intellect scale was used more selectively and more extremely by the pessimistic or low scoring comparison group. A careful examination of these groups indicates that this pattern is characteristic of liberal arts, private college, senior and male students across many comparisons. This is interpreted as a sophistication trend in which the more sophisticated group has a generally more pessimistic outlook about the characteristics of all occupations and a rather selective mode of usage for cultured intellect. It should be noted that college faculty members when compared with undergraduate students deviate in the same way and support the possibility that this is a more sophisticated way of looking at the occupational world. By combining observations of this nature with a general knowledge of the profiles of individual occupations, it is possible for an experienced observer both to identify any occupation profile by a blind labeling technique and also to give an accurate estimate of the constitution of the population from which the profile was derived. There is so much consistency in the data itself, that it can be used to make inferences about populations from the small differences that appear among occupation scale score patterns.

The ideal occupation preference scale has been referred to frequently in the preceding chapters, and in most cases it has been used to compare the ranking of ideal choices with variability in occupation profiles between comparable groups. An overall pattern can be detected in the like-to-be scores that is not easily discernible in the individual reports given in separate chapters. By the use of a multiple correlation technique a study has been made of the relative importance of two scales, wealthy and personal satisfaction, in predicting the position of an occupation on the like-to-be scale. A careful study of the data revealed that like-to-be scores varied from group to group largely as a function of the cultured intellect and material and social success dimensions. Personal satisfaction and wealthy are respectively markers on these two factors and represent significant controlling variables for the like-to-be score. Male liberal arts students' occupation scores on the like-to-be scale vary largely as a function of the personal satisfaction that the occupation promises. The ideal occupational preference for them is governed mainly by the cultured intellectual value of an occupation. On the other hand, pre-professional students, high school students, and women rating men give like-to-be scores to occupations primarily as a function of wealth. For these segments of the total population the position of an occupation in the ideal preference scale is a function of the amount of material and social success it promises rather than the degree to which it participates in cultured intellect. In this and other respects, pre-professional students and high school students are much alike. Also, women overestimate considerably the degree to which men value wealth and success in selecting a career and greatly underestimate the degree to which men prefer to be associated with a career which requires them to use their minds and develop their aesthetic sensitivity.

Figure 5 constitutes an effort to summarize the general standing for liberal arts college students of the reference list of occupations on a scale defining the heroes and anti-heroes of

Figure 5

HEROES AND ANTI-HEROES OF THE OCCUPATIONAL WORLD



the occupational world. This is a subjective summary of a vast range of data that expresses a significant conclusion of the research. On the horizontal axis the occupations are divided between the professions and the business and industrial occupations. Vertically, the heroes of the occupational world stand at the top and the anti-heroes at the bottom of another axis. From this figure it is clear that the heroes are predominately professionals and the anti-heroes are largely the business occupations. Only business executive manages to attain heroic stature among the business fields. Two occupations tend to be variable in the sense that to the extent an engineer is perceived as a professional he tends to have higher standing and to the extent he is a participant in business his standing slides downward on the heroic scale. Personnel director also has some of these bridging qualities between the professional and business world. It is curious that there is no occupation in the southwestern quadrant combining anti-heroic qualities and a professional standing. It has been suggested that a mortician might well find a place in this quadrant if he were included in the research study.

Unresolved Issues

Three research questions were explored in the course of the study but not carried to satisfactory conclusions. First, an attempt was made to investigate several behavioral correlates of stereotyped responses to occupations. Pilot studies were designed and conducted, but the number of variables to be controlled and the complexity of the designs finally dictated an abandonment of these particular lines of investigation. This remains an interesting and intriguing field and one that requires a concerted attack to develop adequate materials and reliable results.

A second concern of the study was to investigate the relationship between various measures of personality and responses to occupations. This particular problem was greatly complicated by the lack of variability between subjects in their responses to occupations. After some investigation of different lines of attack on this problem, it was concluded that there is insufficient variability within populations in responses to the occupations questionnaire to lead to satisfactory prediction of response variability from personality measures. In general, it appears that responses to occupations are established so early and so firmly that they tend to override most of the personality variables that are measured by standard tests. Some work was done in the identification of deviant response patterns to the occupations, but the numbers of such students and their distribution over a variety of different groups of subjects made it impossible to obtain adequate personality measures on a significant number of them. This line of investigation was not pursued further.

A third concern of the study was to determine the relative power of the stereotypes of occupations when compared with other stereotypes known to influence responses. Several studies were conducted comparing the stereotypes of racial and ethnic groups and the stereotypes of occupations. The first order conclusion from this line of research was that ethnicity is the most powerful stereotype followed closely by racial stereotypes, then occupations, and finally, age. The data indicate that occupational stereotypes were just slightly less potent than ethnic and racial stereotypes. However, very complex interaction patterns between the various stereotype systems were observed and a whole new line of research was opened by this investigation. The topic was not pursued beyond the pilot studies, although a clear impression was gained of the relative potency of major stereotype systems.

Implications

A primary reason for pursuing an investigation of the images of occupations was to investigate the values of college students as they are revealed through student responses to this important area of experience. It was believed that occupations represent major decisions and have vital personal implications for students and would be responded to in ways that would reveal the attitudes and feelings of students about the world in general as well as the world of occupations. Occupations were selected as a stimulus system because they have a deceptive quality. They are neither threatening nor immediately personal, and therefore they do not set off some of the defensive responses that greet other stimulus systems.

In revealing the choices they believe they are making when selecting occupations, students indicate that which they value. College students have stated that cultured intellect is the most significant dimension for them in approaching the occupational world. This reveals a major concern among students for the quality of their intellectual and aesthetic experiences as professional persons. This feature of the occupational choice is uppermost and is the main point of reference. The first and most difficult choice that faces a student approaching a career is the extent to which he can lead a life that will challenge his intellectual capabilities. Will he be tested to the fullest and thereby developed to his full potential by his life's work? This is the dominant value held by college students, and it represents a strongly idealistic point of view. These data suggest that for nearly a decade students have been most concerned with the degree to which they will participate in a rich intellectual life.

The second dimension of material and social success asserts that young people are concerned about material values. They do care about their place in the world of things and experiences. However, for most college youth this dimension of a career is secondary to the first. The allegation that most young people are materialistic is not borne out by these data. There is one curious feature in this dimension that has been noted by the writers in an earlier study. The wealth and status dimension has rather low loadings on personality traits. This suggests that students do not see wealth and success as having much effect on personality. The personality dimension is independent of material and social considerations. For the young, wealth and power do not corrupt.

The sociability dimension underlines the great concern of young people for the pattern of social relationships in their adult lives. Students attach great importance to this critical element in the world of work. This dimension expresses the perceived opportunities in occupations to relate meaningfully to others. In addition, this dimension gives a description of the kinds of people with whom one will work. Thus, it defines a pattern of human interactions that are most important for happiness on and off the job.

Personal control provides a most exciting new insight into the student value structure. It suggests that one possible goal is to attain full control of emotional and impulse life. Students are continually in search of mastery over their inner lives, and they readily perceive occupations in these terms. Evidently, high standing on this factor is generally compatible with high and low values on the other often more turbulent but largely objective dimensions.

The strong confident factor was compared earlier with the productive aspect of the protestant ethic. This dimension indicates that hard work, dedication, and task-orientation are elements in the student value system. It is interesting that the dimension most closely related to production on the job should have a limited role compared to cultured intellect, or sociability. The continuous observation in this study that students are rarely concerned with the job, as such, is supported by the role of this factor. It is the implications of the job for a way of life that have been all important. In an emotional sense the content of the job is an isolated and compartmentalized aspect of the world of work.

Finally, the emergence of a political-personal dimension of conservatism-radicalism taps a traditional value area. The tendency of students to evaluate reality in this manner has been the object of many studies. It is interesting to find that this value is captured in a study of occupations where the personality implications far outweigh the political. Students seem to be saying in this response pattern, that in any major choice the implications for the politico-personal dimensions of personality are important. There are major personal connotations of the liberal-conservative axis that permeate all experience.

Some of the findings contained in this report have interesting implications for communications between groups of people. These results uncover areas of possible tension and misunderstanding at points of group intersection which in themselves are of interest and point to the possibility of further developments of this kind of analysis on other topics. For example, the different meaning of the dimensions of cultured intellect and conservatism for business administration and engineering students on the one hand and liberal arts students on the other can lead to potential misunderstanding in responding to occupations by both groups. The response to home and family career on the part of men and women in considering women's careers is a striking case in which two groups in continuous close relation to one another have opposed reactions to a significant issue for both of them. A third example was not fully developed in the report but is implicit in some of the data that were presented. This is the suggestion that non-college bound high school students respond rather differently to elements of the occupational world than the college bound students who may be sitting beside them in the same classrooms. Here again, the dimensions and meaning of the occupational world are subtly different for two groups that may find difficulty in communicating across an invisible barrier.

The data presented in this study have important implications for the work of counseling and guidance personnel in high schools and colleges. These data provide a rather detailed picture of the views of occupations held by high school and college students who are approaching career decisions in the course of their school work. Counselors are continually trying to advise students facing the occupational world about the choices before them and their preparation to respond meaningfully to these choices. It should be noted again that college students have little or no information about the content of the day-to-day work in an occupation, but they do have a series of impressions about the implications for life and personality of choosing particular occupations. It is important that guidance personnel be fully aware of the preconceptions that students bring to their thinking about the occupational world. The profiles and dimensions described in this report add to the general understanding of occupations contained in the literature. It is clear that students approach the occupational world with firmly developed impressions of what they will find. There is no question that these impressions are too narrow and restrictive to guide them adequately. It is vital that students be informed that there are opportunities for a wide range of personality types to find meaningful roles within many occupational alternatives. The impressions of students about the nature of occupations are based to a certain extent on reality because they tend to be self-confirming prophecies. If students have, for a generation, felt as they are alleged to in this investigation, then recruitment into a number of fields has been severely limited by these preconceptions. It is very likely that a person of distinctive personality structure could make an unusual impact on many fields which are overburdened with recruits following the line of least stereotyped resistance. For example, in the field of science, the intelligent, sociable, personally controlled, and outwardly strong individual might find a significant role in science administration and coordination should he choose that unlikely field. Alternatively the highly intelligent, surgent, and sociable personality drawn into the field of accounting might well rise to the top of a large corporation because of his unusual combination of professional skills and personality characteristics. It is clearly of advantage to students to recognize that all professions and occupations accept and reward a much wider range of personality types and styles than is implied by the occupational impressions contained in the responses recorded in this report. Guidance and counseling workers should be alert to the preconceptions and stereotypes that students bring with them as they begin any discussion about occupations and occupational alternatives. Very often these prejudices are not visible in a discussion with a student, but rather they are latent behind the things that the student does not consider rather than manifest in the things about which he chooses to talk.

A fascinating dilemma for the small college is implicit in several of the results that are reported. Since even the large universities today are striving mightily to establish within their precincts a series of small and intimate colleges, the issue that is raised in these data is important both for small private liberal arts colleges and small colleges within the confines of large and sprawling universities. One of these observations is the fact that senior students in the longitudinal study were more alike in their responses to occupations than they were as freshmen. In other words, the passage of four years of college led to greater homogeneity and a more limited conception of the occupational world within the group than was to be found among them as freshmen. The impact of college was to cause them to become more alike in their thinking and to recognize even less than they had before the variability which characterizes all occupations. A similar pattern was noted in the comparison between public and private colleges. The private colleges, which by their very nature are much smaller and more intimate than public universities, showed a greater degree of agreement within their student bodies and a narrower range of responses to the occupational titles. These two observations suggest that the effect of the small intimate private college is to coalesce students in a much more coherent and standard approach to this one set of pertinent stimuli. There is less diversity, less pluralism, less variability in the responses of seniors as compared with freshmen and private as compared with public college students in the samples. It appears that the smaller and more intimate the academic unit the greater the degree of consensus that arises in the group. In some sense the group is not responding to the wide range of alternatives and possibilities in the outer world, but rather the group is responding on a narrow front to its own internal range of responses. It could be argued that the colleges are forging a conformity, a conservatism, a stereotypic approach to a pluralistic world. It was suggested in the text that in the very nature of a college, it strives hard to build a common language so that all students and faculty can share experiences and exchange ideas effectively with one another in the learning community. However, the effect of this may be to narrow the range of discussion, to eliminate a variety of alternative interpretations, and to lead to a stereotyped and monolithic response to external events. The dilemma facing the college is how to maintain a highly effective level of meaningful communication among people in regular contact with one another without forcing a common point of view in looking at social, political, and public events. Although a great deal has been written in recent years about the meaning of education and the nature of the college, it is surprising to find that almost no instances come to mind of an honest and open discussion of this interesting problem.

The concern of the organized professions about their images among students is certainly justified in some of the cases discussed in these pages. Although this research does not present any answers on how stereotypes may be changed, it certainly suggests areas in which changes are needed. As indicated in the opening of this chapter, the dimensions of response that have been discovered and related to the various occupations represent the clear points of attack for any program designed to remedy public responses to a profession or occupation. The field which wishes to consider carefully and develop an approach to improving its image should study exactly how it is perceived on the various dimensions and then attempt the improvement of the image dimension by dimension. In the past the few efforts that have been made to shift the public conception of a particular profession have often been misguided and frequently carried out without any attention to the clear areas of strength and weakness that existed. There is nothing mysterious about the public response to any occupation, but it is a complex response and one that does not easily yield to intuitive analysis. All of these dimensions and their implications are perfectly understandable once they are discovered and pointed out and it is the shrewd observer indeed who can identify them on the basis of his experience. Throughout this report it has been stressed that the authors are only reporting the views of various groups of students and adults. There has never been any suggestion that there is a necessary connection between the reality of the images and the reality of the participants in an occupation. Nevertheless, it is important to many disciplines to know how they are seen by the public and to respond meaningfully to the perceptions that exist. All too often the professional responds with anger at the suggestion that people have certain beliefs about his field, rather than with concern for strengthening the view of his field so that it may attract a higher percentage of the always limited supply of high level talent.

These conclusions and implications are supplementary to many others contained within the chapters describing particular studies. Since this research ranged over such a wide array of groups and hypotheses, it seemed appropriate to draw many of the conclusions at the time the data were being discussed. Some of the more general patterns which emerged from the data are described in this chapter and a few of the many implications which flowed from such a complex body of data are touched upon.

Chapter XIII

SUMMARY

The study of the images of occupations is based on the assumption that the world of work is of primary importance to young men and women in the process of choosing a career. They must choose among a bewildering array of complex careers about which they know very little. This problem is most exaggerated in the case of university students who face a broad choice of occupational alternatives.

The Occupations Project was initiated in 1957 to study the images held by college students of the major high-level professions and occupations entered by college men. This report summarizes the second phase of the Project, and it draws continually on the data collected in the first study. The main research instrument used throughout the Project is the occupations questionnaire. The standard form of the questionnaire requests a student to rate each of 15 occupations against 34 two-ended seven-point scales. He also is asked to indicate his reactions to the same set of occupation titles on an ideal occupation preference scale. A number of items of information about the student and his family are requested at the end of the questionnaire. Variations on the basic instrument were developed for use in studying the images of women's occupations and in an investigation of the images held by high school students. The properties of new occupation titles in addition to a reference set of 15 were explored with alternate lists of occupations. Approximately 5000 respondents contributed the questionnaire data that are contained in the report. In all but a few instances the subjects were grouped in random samples from specific target populations. The overall rate of completed questionnaires from the many samples was respectably high.

A detailed analysis of the response patterns to the questionnaire of 39 sampling units of subjects established beyond question the consistency of the occupational images. The technique of analysis used in this investigation represents an unusual and methodologically interesting approach to the analysis of response patterns in a large and diverse target population. Consistency of occupational images was also explored within the structure of responses to the standard array of occupations. In this analysis also, the integrity of response patterns of diverse samples of subjects was respected by the method of comparing and matching results from many groups. Six orthogonal factors were extracted from the data by a varimax rotation to represent the response structure of college students. The most important dimension for responding to the occupational world was labeled cultured intellect, a combination of intelligence, aesthetic sensitivity, individualism, and unselfishness among a number of components. The other five clearly recognizable and independent dimensions were the following: material and social success, sociability, personal control, strong confidence, and conservatism. The professions tend to receive favorable ratings on these scales from liberal arts students and the business related occupations on average are less highly regarded. Evidence was presented that indicated a difference in the characteristics and meaning of these dimensions for groups of pre-professional business administration and engineering students in comparison with samples of liberal arts students.

Maps have been presented organizing the occupations in space and expressing their relations to the factor structure and to one another. Verbal profiles are presented to give added richness to the images that are revealed in the averaged patterns of student responses. The profiles of occupations from an earlier report are reprinted and amplified, and a set of new profiles have been prepared on the basis of data collected in this study.

A longitudinal study was designed to probe changes in the images held by students during their period of college attendance in one private men's liberal arts college. The data permitted an assessment of the form and sequence of changes in the first and second half of a college career. It was observed that a form of senior pessimism noted in the first study is more properly termed upper-class pessimism since the change of attitude toward occupations begins quite early in the course of college. Evidence is presented that senior scores show less variability of response than the scores of the same students as freshmen. However, only small overall changes were recorded from freshman to senior year in the liberal arts college.

The occupational images held by pre-professional and professional students were compared with those of liberal arts undergraduates in one sub-study. In general the two populations were in agreement. However, on the image of the specific occupation for which the pre-professionals were preparing they held much more favorable views. The elements in the personally relevant images that were differentially favored by the professional students are quite revealing of their concerns.

New demographic analyses were undertaken in this study. The importance of geographic region for the images was tested and found to be relatively minor. The new results did focus attention on the significance of the differences in viewpoints held by public and private college students. Some of the implications of this dimension for understanding students were explored.

A sample of college faculty members completed the questionnaire, permitting a comparison of student and faculty views of occupations. No evidence was found for a change in student views in the direction of faculty beliefs when freshmen and seniors were compared. Several lines of investigation were followed in probing the inner structure of stereotypes of occupations in the faculty community.

High school students were included in this study in the interest of examining the development of images and to learn about the views of a distinctly different population from college undergraduates. The relations among categories of high school students and between high school and college students were studied. A whole new range of issues were uncovered by this set of analyses. A basic continuity of view between high school and college students was observed, but several segments of the high school population were identified that departed substantially from the collegiate view of occupations.

A final focus of the research was on the images of occupations for women. A series of occupation titles relevant to the career interests of women were studied. The responses of both men and women to these titles were analyzed. A series of questions on the ideal career interests of women and the relation of these interests to marriage and family gave rise to some intriguing results.

Many specific hypotheses and explorations are contained in each of the component studies that constitute the report. Some general conclusions and implications are presented that capture several of the major trends in the data. The images of occupations serve to reveal many facets of the values and beliefs of students when their inner structure and interrelationships are examined.

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APPENDIX A

SAMPLE QUESTIONNAIRE PAGES

[INSTRUCTIONS--GENERAL WOMEN'S FORM]

Name: ....

Class .... College or University: ....

INSTRUCTIONS

The purpose of this study is to find out the impression that people have of various occupations entered by men by having them judge the occupations against a series of descriptive scales. In taking this test, please make your judgments on the basis of what *you* feel about these occupations as they involve men in our society. On each page of this booklet you will find a different occupation to be judged and beneath it a set of scales. You are to rate the occupation on each of these scales in order.

Here is how you are to use these scales:

If you feel that the occupation at the top of the page is *very closely related* to one end of the scale, you should place your check-mark as follows:

has a pretty wife ..√.. :......:......:......:......:......:...... wife is not pretty

or

has a pretty wife ...... :......:......:......:......:......: ..√.. wife is not pretty

If you feel that the occupation is *quite closely related* to one or the other end of the scale (but not extremely), you should place your check-mark as follows:

low social status ...... : ..√.. :......:......:......:......:...... high social status

or

low social status ...... :......:......:......:......: ..√.. :...... high social status

If the occupation seems *only slightly related* to one side as opposed to the other side (but is not really neutral), then you should check as follows:

intelligent ...... :......: ..√.. :......:......:......:...... unintelligent

or

intelligent ...... :......:......:......: ..√.. :......:...... unintelligent

The direction toward which you check, of course, depends upon which of the two ends of the scale seems most characteristic of the occupation you are judging.

If you consider the occupation to be *neutral* on the scale, both sides of the scale *equally associated* with the occupation, or if the scale is *completely irrelevant*, unrelated to the occupation, then you should place your check-mark in the middle space:

pessimistic ...... :......:......: ..√.. :......:......:...... optimistic

IMPORTANT: (1) Place your check-marks *in the middle of spaces*, not on the boundaries:

This *Not This*

...... : ..√.. :......:......:...√...:......

(2) Be sure you check every scale for every occupation—*do not omit any.*

(3) Never put more than one check-mark on a single scale.

You will notice that the same scales are used for each occupation, so *do not look back and forth* through the scales. Do not try to remember how you checked similar scales earlier in the test. *Make each item a separate and independent judgment.* Work at fairly high speed through this test. Do not worry or puzzle over individual items. It is your first impressions, the immediate "feelings" about the occupations as they involve men, that we want. On the other hand, please do not be careless, because we want your true impressions.

[INSTRUCTIONS--WOMEN'S STUDY]

Name:..

Class:.............................. College or University..

INSTRUCTIONS

The purpose of this study is to find out the impression that people have of college women who are preparing for various occupational goals, by having them judge college women with the occupational goals against a series of descriptive scales. In taking this test, please make your judgments on the basis of what *you* feel about college women who would be going into these occupations. On each page of this booklet you will find a different occupation to be judged and beneath it a set of scales. You are to rate the college women who would be going into this occupation on each of these scales in order. Here is how you are to use these scales:

If you feel that college women with the occupational goal at the top of the page are ***very much characterized by*** one end of the scale, you should place your check-mark as follows:

individualistic ..V..:......:......:......:......:......:...... conformist

or

individualistic ......:......:......:......:......:......:..V.. conformist

If you feel that college women with the occupational goal are ***quite well described by*** one or the other end of the scale (but not extremely), you should place your check-mark as follows:

sociable ......:..V..:......:......:......:......:...... retiring

or

sociable ......:......:......:......:......:..V..:...... retiring

If college women with the occupational goal seem ***only slightly described by*** one side as opposed to the other side (but your feeling is not really neutral), then you should check as follows:

intelligent ......:......:..V..:......:......:......:...... unintelligent

or

intelligent ......:......:......:......:..V..:......:...... unintelligent

The direction toward which you check, of course, depends upon which of the two ends of the scale seems most characteristic of college women with the occupation you are judging.

If you consider college women with the occupational goal to be ***neutral*** on the scale, both sides of the scale ***equally associated*** with the occupational goal, or if the scale is ***completely irrelevant,*** unrelated to the occupational goal, then you should place your check-mark in the middle space:

cheerful ......:......:......:..V..:......:......:...... depressed

IMPORTANT: (1) Place your check-marks ***in the middle of spaces,*** not on the boundaries:

This ***Not This***

......:..V..:......:......:......V......:......

(2) Be sure you check every scale for every occupational goal — ***do not omit any.***

(3) Never put more than one check-mark on a single scale.

You will notice that the same scales are used for each occupational goal, so ***do not look back and forth*** through the scales. Do not try to remember how you checked similar scales earlier in the test. ***Make each item a separate and independent judgment.*** Work at fairly high speed through this test. Do not worry or puzzle over individual items. It is your first impressions, the immediate "feelings" about the occupational goals as they involve college women, that we want. On the other hand, please do not be careless, because we want your true impressions.

ID

[INSTRUCTIONS--HIGH SCHOOL STUDY]

Name.. School..

INSTRUCTIONS

The purpose of this study is to find out the ideas high school students have about men in professions or jobs. On each of the following pages there is a different occupation for you to describe. Your description can be made by marking the list of words on the page. Take a look to see how this is done. Each pair of words forms a scale. By making a check mark along the scale you can indicate what you associate with the particular occupation.

If you feel that the occupation at the top of the page is *very closely related* to one end of the scale, you should place your check mark as follows:

wise ..✓..:......:......:......:......:......:...... foolish OR wise ......:......:......:......:......:......:..✓.. foolish

If you feel that the occupation is *quite closely related* to one or the other end of the scale, but not extremely, you should place your check mark as follows:

soft ......:..✓..:......:......:......:......:...... hard OR soft ......:......:......:......:......:..✓..:...... hard

If the occupation seems *only slightly related* to one side as opposed to the other side, but is not really neutral, then you should check as follows:

active ......:......:..✓..:......:......:......:...... passive OR active ......:......:......:......:..✓..:......:...... passive

If you think both words are *equally related to the occupation*, or that they do not apply at all, you should check the middle space on the scale, like this:

pessimistic ......:......:......:..✓..:......:......:...... optimistic

For example, if the occupation at the top of the page were PROFESSIONAL BASEBALL PLAYER, and you think a Professional Baseball Player is extremely cautious or extremely rash, you should mark the scale like this:

cautious ..✓..:......:......:......:......:......:...... rash OR cautious ......:......:......:......:......:......:..✓.. rash

If you think a baseball player is quite cautious or quite rash, you should check mark the scale like this:

cautious ......:..✓..:......:......:......:......:...... rash OR cautious ......:......:......:......:......:..✓..:...... rash

If you think him only slightly cautious or rash, you should mark the scale like this:

cautious ......:......:..✓..:......:......:......:...... rash OR cautious ......:......:......:......:..✓..:......:...... rash

If you think that both cautious and rash apply equally to a baseball player, you should check mark the middle of the scale like this:

cautious ......:......:......:..✓..:......:......:...... rash

IMPORTANT: Place your check marks in the middle of the spaces, not on the boundaries:

This ......:..✓..:......:...... *Not This* ......:......✓......:......

Be sure you check every scale for every occupation — *do not omit any.*

Never put more than one check mark on a single scale.

You will notice that the same scales are used for each occupation, so do not look back and forth through the scales. Do not try to remember how you checked similar scales earlier in the test. Make each item a separate and independent judgment. Work at fairly high speed through this test. Do not worry or puzzle over individual items. It is your first impressions, the immediate "feelings" about the occupations as they involve men that we want. On the other hand, please do not be careless because we want your true impressions.

[SAMPLE PAGE--OSGOOD FORM]

PERSONNEL DIRECTOR (10)

1. wealthy ......:......:......:......:......:......:...... not well-to-do
2. conformist ......:......:......:......:......:......:...... individualist
3. has a pretty wife ......:......:......:......:......:......:...... wife is not pretty
4. doesn't play poker ......:......:......:......:......:......:...... plays poker
5. has good taste ......:......:......:......:......:......:...... has poor taste
6. unhappy home life ......:......:......:......:......:......:...... happy home life
7. cleancut ......:......:......:......:......:......:...... strange
8. low opportunity for advancement ......:......:......:......:......:......:...... high opportunity for advancement
9. plays chess ......:......:......:......:......:......:...... doesn't play chess
10. not interested in art ......:......:......:......:......:......:...... interested in art
11. high social status ......:......:......:......:......:......:...... low social status
12. unsuccessful ......:......:......:......:......:......:...... successful
13. great personal satisfaction ......:......:......:......:......:......:...... little personal satisfaction
14. doesn't play bridge ......:......:......:......:......:......:...... plays bridge
15. powerful in public affairs ......:......:......:......:......:......:...... not powerful in public affairs
16. socially unpopular ......:......:......:......:......:......:...... socially popular
17. radical ......:......:......:......:......:......:...... conservative
18. worthless ......:......:......:......:......:......:...... valuable
19. deep ......:......:......:......:......:......:...... shallow
20. changeable ......:......:......:......:......:......:...... stable
21. active ......:......:......:......:......:......:...... passive
22. colorless ......:......:......:......:......:......:...... colorful
23. optimistic ......:......:......:......:......:......:...... pessimistic
24. soft ......:......:......:......:......:......:...... hard
25. hot ......:......:......:......:......:......:...... cold
26. rash ......:......:......:......:......:......:...... cautious
27. interesting ......:......:......:......:......:......:...... boring
28. selfish ......:......:......:......:......:......:...... unselfish
29. wise ......:......:......:......:......:......:...... foolish
30. weak ......:......:......:......:......:......:...... strong
31. sensitive ......:......:......:......:......:......:...... insensitive
32. excitable ......:......:......:......:......:......:...... calm
33. rational ......:......:......:......:......:......:...... intuitive
34. In summary, what do you think is the general personal effectiveness of the PERSONNEL DIRECTOR?

personally effective ......:......:......:......:......:......:...... personally ineffective

[SAMPLE PAGE--CATTELL FORM]

BUSINESS EXECUTIVE (03)

1. wealthy ___:___:___:___:___:___:___ not well-to-do
2. conformist ___:___:___:___:___:___:___ individualist
3. has a pretty wife ___:___:___:___:___:___:___ wife is not pretty
4. doesn't play poker ___:___:___:___:___:___:___ plays poker
5. has good taste ___:___:___:___:___:___:___ has poor taste
6. unhappy home life ___:___:___:___:___:___:___ happy home life
7. cleancut ___:___:___:___:___:___:___ strange
8. low opportunity for advancement ___:___:___:___:___:___:___ high opportunity for advancement
9. plays chess ___:___:___:___:___:___:___ doesn't play chess
10. not interested in art ___:___:___:___:___:___:___ interested in art
11. high social status ___:___:___:___:___:___:___ low social status
12. unsuccessful ___:___:___:___:___:___:___ successful
13. great personal satisfaction ___:___:___:___:___:___:___ little personal satisfaction
14. doesn't play bridge ___:___:___:___:___:___:___ plays bridge
15. powerful in public affairs ___:___:___:___:___:___:___ not powerful in public affairs
16. socially unpopular ___:___:___:___:___:___:___ socially popular
17. radical ___:___:___:___:___:___:___ conservative
18. worthless ___:___:___:___:___:___:___ valuable
19. adaptable in habits ___:___:___:___:___:___:___ inflexible in habits
20. unintelligent ___:___:___:___:___:___:___ intelligent
21. calm ___:___:___:___:___:___:___ excitable
22. has emotional problems ___:___:___:___:___:___:___ has no emotional problems
23. self-assertive ___:___:___:___:___:___:___ submissive
24. depressed ___:___:___:___:___:___:___ cheerful
25. persevering ___:___:___:___:___:___:___ quitting
26. indifferent to people ___:___:___:___:___:___:___ attentive to people
27. optimistic ___:___:___:___:___:___:___ pessimistic
28. evasive about life ___:___:___:___:___:___:___ realistic about life
29. thoughtful ___:___:___:___:___:___:___ unreflective
30. unsure ___:___:___:___:___:___:___ confident
31. self-sufficient ___:___:___:___:___:___:___ attention-demanding
32. irresponsible ___:___:___:___:___:___:___ responsible
33. sociable ___:___:___:___:___:___:___ retiring
34. In summary what do you think is the general personal effectiveness of the BUSINESS EXECUTIVE?

personally effective ___:___:___:___:___:___:___ personally ineffective

[SAMPLE PAGE--A-FORM]

SOCIAL WORKER (15)

1. wealthy ......:......:......:......:......:......:...... not well-to-do
2. conformist ......:......:......:......:......:......:...... individualist
3. has a pretty wife ......:......:......:......:......:......:...... wife is not pretty
4. irresponsible ......:......:......:......:......:......:...... responsible
5. active ......:......:......:......:......:......:...... passive
6. selfish ......:......:......:......:......:......:...... unselfish
7. cleancut ......:......:......:......:......:......:...... strange
8. excitable ......:......:......:......:......:......:...... calm
9. not interested in art ......:......:......:......:......:......:...... interested in art
10. optimistic ......:......:......:......:......:......:...... pessimistic
11. unintelligent ......:......:......:......:......:......:...... intelligent
12. self-sufficient ......:......:......:......:......:......:...... attention-demanding
13. unhappy home life ......:......:......:......:......:......:...... happy home life
14. soft ......:......:......:......:......:......:...... hard
15. high social status ......:......:......:......:......:......:...... low social status
16. has emotional problems ......:......:......:......:......:......:...... has no emotional problems
17. great personal satisfaction ......:......:......:......:......:......:...... little personal satisfaction
18. rash ......:......:......:......:......:......:...... cautious
19. powerful in public affairs ......:......:......:......:......:......:...... not powerful in public affairs
20. colorless ......:......:......:......:......:......:...... colorful
21. self-assertive ......:......:......:......:......:......:...... submissive
22. depressed ......:......:......:......:......:......:...... cheerful
23. persevering ......:......:......:......:......:......:...... quitting
24. indifferent to people ......:......:......:......:......:......:...... attentive to people
25. radical ......:......:......:......:......:......:...... conservative
26. evasive about life ......:......:......:......:......:......:...... realistic about life
27. wise ......:......:......:......:......:......:...... foolish
28. socially unpopular ......:......:......:......:......:......:...... socially popular
29. sensitive ......:......:......:......:......:......:...... insensitive
30. weak ......:......:......:......:......:......:...... strong
31. sociable ......:......:......:......:......:......:...... unsociable
32. worthless ......:......:......:......:......:......:...... valuable
33. unsure ......:......:......:......:......:......:...... confident
34. In summary, what do you think is the general personal effectiveness of the SOCIAL WORKER?

personally effective ......:......:......:......:......:......:...... personally ineffective

[SAMPLE PAGE--WOMEN'S STUDY]

A co-ed majoring in or otherwise training as an

ACTRESS

as a *full-time career.* (02)

1.	Intelligent	___:___:___:___:___:___:___	Unintelligent
2.	Doesn't participate in extra-curricular activities	___:___:___:___:___:___:___	Participates in extra-curricular activities
3.	Calm	___:___:___:___:___:___:___	Excitable
4.	Unsure	___:___:___:___:___:___:___	Confident
5.	Worldly	___:___:___:___:___:___:___	Naive
6.	Attractive to men	___:___:___:___:___:___:___	Unattractive to men
7.	Comes from lower-class background	___:___:___:___:___:___:___	Comes from upper-class background
8.	Selfish	___:___:___:___:___:___:___	Unselfish
9.	High occupational goals	___:___:___:___:___:___:___	Low occupational goals
10.	Cheerful	___:___:___:___:___:___:___	Depressed
11.	Conservative	___:___:___:___:___:___:___	Radical
12.	Great personal satisfaction	___:___:___:___:___:___:___	Little personal satisfaction
13.	Irresponsible	___:___:___:___:___:___:___	Responsible
14.	Sensitive	___:___:___:___:___:___:___	Insensitive
15.	Has emotional problems	___:___:___:___:___:___:___	Has no emotional problems
16.	Self-assertive	___:___:___:___:___:___:___	Submissive
17.	Well-rounded personality	___:___:___:___:___:___:___	Narrow personality
18.	Uncertain	___:___:___:___:___:___:___	Poised
19.	Will not be well-to-do	___:___:___:___:___:___:___	Will be well-to-do
20.	Wise	___:___:___:___:___:___:___	Foolish
21.	Crude	___:___:___:___:___:___:___	Refined
22.	Sociable	___:___:___:___:___:___:___	Retiring
23.	Attention-demanding	___:___:___:___:___:___:___	Self-sufficient
24.	Narrow-minded	___:___:___:___:___:___:___	Open-minded
25.	Is upward mobile	___:___:___:___:___:___:___	Is not upward mobile
26.	Indifferent to others	___:___:___:___:___:___:___	Understanding of others
27.	Cautious	___:___:___:___:___:___:___	Rash
28.	Interested in world affairs	___:___:___:___:___:___:___	Has limited interest
29.	Has few dates	___:___:___:___:___:___:___	Dates a lot
30.	Conformist	___:___:___:___:___:___:___	Individualist
31.	Realistic about life	___:___:___:___:___:___:___	Unrealistic about life
32.	Intravert	___:___:___:___:___:___:___	Extravert
33.	Genuinely interested in people	___:___:___:___:___:___:___	Social climber
34.	Academically unsuccessful	___:___:___:___:___:___:___	Academically successful

[SAMPLE BACKGROUND DATA PAGE

USED WITH A-FORM FOR MEN]

We would appreciate very much the following information.

What is your present or intended major department (or professional program): ....

....

What occupation do you intend to enter: ....

What other occupations are you considering:

....

....

....

What is your father's occupation (please be specific, e.g., *supervisor of a factory employing 400 men* rather than supervisor; *corporation lawyer* rather than lawyer); if your father is not alive or if he is retired indicate the last job that he held: ....

In which one of the following types of communities did you spend *most* of your childhood:

rural area or a small town (less than 10,000 pop.) 1. ....

a small city (10,000-100,000 pop.) 2. ....

a large city (more than 100,000 pop.) 3. ....

a suburb 4. ....

Please indicate at which of the following points your father terminated his education:

Grade School	Attended	....
	Graduated	....
High School	Attended	....
	Graduated	....
College	Attended	....
	Graduated	....

Graduate Degreess (indicate: MA, L.L.B., M.D., etc.)

....

[IDEAL OCCUPATION PREFERENCE SCALE]

Rate each of the following occupational positions according to how much *you* would like to enter them *if* you were free to make the choice without regard for training, ability, or time and expense required for specialized study. In other words, rate each occupational position in terms of how much you would like to be in it if you could be in any occupation you wanted.

1. Accountant like to be ....:........:........:........:........:........:........ not like to be
2. Artist like to be ....:........:........:........:........:........:........ not like to be
3. Business Executive like to be ....:........:........:........:........:........:........ not like to be
4. College Professor like to be ....:........:........:........:........:........:........ not like to be
5. Doctor like to be ....:........:........:........:........:........:........ not like to be
6. Engineer like to be ....:........:........:........:........:........:........ not like to be
7. Industrial Manager like to be ....:........:........:........:........:........:........ not like to be
8. Lawyer like to be ....:........:........:........:........:........:........ not like to be
9. Office Supervisor like to be ....:........:........:........:........:........:........ not like to be
10. Personnel Director like to be ....:........:........:........:........:........:........ not like to be
11. Retail Store Manager like to be ....:........:........:........:........:........:........ not like to be
12. Sales Manager like to be ....:........:........:........:........:........:........ not like to be
13. School Teacher like to be ....:........:........:........:........:........:........ not like to be
14. Scientist like to be ....:........:........:........:........:........:........ not like to be
15. Social Worker like to be ....:........:........:........:........:........:........ not like to be

PLEASE CHECK TO SEE THAT YOU HAVE COMPLETED EVERY PAGE.

APPENDIX B

TABULAR SUMMARIES

NOTES TO TABLES 63 THROUGH 70

1. Group numbers in Tables 63 through 68 identify the groups listed in Chapter III, pp. 50-52, except group A0008.

Group Number	Group Identification
20137	(1) 48 eastern public and private liberal arts men and women; Osgood form; varimax + manual rotation.
A0010	(7) 40 midwestern public liberal arts men; Osgood form; varimax + manual rotation.
25133	(2) 36 eastern private liberal arts faculty men; Cattell form; varimax rotation.
27136	(9) 48 eastern public and private liberal arts women; Cattell form; varimax rotation.
27135	(3) 48 eastern public and private liberal arts men; Cattell form; varimax rotation.
A0009	(6) 40 midwestern public liberal arts men; Cattell form; varimax + manual rotation.
A0002	(4) 40 midwestern public engineering men; form A; varimax + manual rotation.
A0005	(5) 40 midwestern public business administration men; form A; varimax + manual rotation.

NOTES TO TABLES 63 THROUGH 70--Continued

Group Number		Group Number
A0003	(11)	40 midwestern public liberal arts men; form A; varimax rotation.
A0008		40 midwestern public liberal arts men; form A; alternate occupation list A; varimax rotation.

2. High school sample in Table 69 was a random stratified sample of 240 college bound and non-college bound men and women from all schools on both occupation lists; varimax + manual rotation.

3. Scales numbered 01 through 35 in Tables 63 through 69 are listed in Table 2, p. 15, and the rest of the scales are listed in Table 1, pp. 12 and 13.

TABLE 63

ROTATED FACTOR LOADINGS

FOR 10 GROUPS ON FACTOR A -- CULTURED INTELLECT

SCALES No.[a]	 Name	GROUP NUMBERS [a] 20137	 A0010	 25133	 27136	 27135
1	WEALTHY	-.106	-.019	-.273	-.127	-.101
2	INDIVIDIST	.571	.646	.699	.688	.458
3	PRETY WIFE	-.073	.153	.046	-.105	.116
4	RESPONSIBL			.115	.063	.203
5	ACTIVE	.342	.574			
6	UNSELFISH	.608	.380			
7	CLEANCUT	-.099	.025	-.238	-.186	-.084
8	CALM	.129	.076	-.038	-.031	.086
9	INTRST ART	.509	.465	.700	.612	.559
10	OPTIMISTIC	.154	.419	.076	.054	.105
11	INTELLIGNT			.613	.675	.629
12	SELF SUFNT			.363	.273	.321
13	HAPPY HOME	.208	.257	.064	.144	.096
14	HARD	-.149	.224			
15	HI SOC STA	.253	.223	.154	.292	.284
16	NO EMOT PB			-.089	-.085	-.187
17	PERS SATIS	.757	.678	.668	.745	.649
18	CAUTIOUS	.083	-.137			
19	POWFUL AFR	.282	.262	.097	.084	.247
20	COLORFUL	.535	.658			
21	SELF ASSTV			.039	.225	.178
22	CHEERFUL			-.060	-.042	-.020
23	PERSEVERNG			.299	.424	.293
24	ATENTV PPL			.019	.134	.067
25	CONSERVTIV	-.299	-.457	-.670	-.570	-.325
26	REALST LIF			.151	.250	.175
27	WISE	.727	.523			
28	SOC POPLAR	.243	.278	.054	.105	.130
29	SENSITIVE	.600	.344			
30	STRONG	.315	.540			
31	SOCIABLE			-.118	-.091	-.055
32	VALUABLE	.737	.555	.695	.675	.645
33	CONFIDENT			-.036	.074	.105
34	PESLY EFFT	.630	.533	.416	.460	.441
35	LIKE TO BE	.321	.381	.680	.262	.435
36	PLYS POKER	-.394	.004	-.246	-.476	-.354
37	GOOD TASTE	.296	.402	.710	.444	.381
38	OPTN ADVAN	.104	.173	-.058	.084	.052
39	PLYS CHESS	.513	.413	.633	.526	.591
40	SUCCESSFUL	.378	.351	.210	.228	.284
41	PLYS BRIDG	.098	.189	-.124	.049	.038
42	DEEP	.787	.720			
43	ADAPTL HBT			.426	.181	.168
44	STABLE	.058	-.217			
45	HOT	.259	.271			
46	INTERESTNG	.653	.650			
47	THOUGHTFUL			.762	.702	.594
48	RATIONAL	-.037	.139			

[a] See Notes to Tables on pages B-2 and B-3

TABLE 63 -- Continued

SCALES No.	Name	GROUP NUMBERS A0009	 A0002	 A0005	 A0003	 A0006
1	WEALTHY	-.107	.105	.113	-.143	-.073
2	INDIVIDIST	.672	.308	.414	.413	.166
3	PRETY WIFE	-.152	.061	.054	.063	-.035
4	RESPONSIBL	.183	.305	.441	.099	.183
5	ACTIVE		.232	.283	.033	.140
6	UNSELFISH		.364	.580	.446	.385
7	CLEANCUT	-.260	.005	.163	-.247	-.060
8	CALM	.041	.123	.289	.172	.046
9	INTRST ART	.607	.195	.262	.523	.619
10	OPTIMISTIC	.034	.342	.255	.226	-.129
11	INTELLIGNT	.615	.619	.600	.581	.442
12	SELF SUFNT	.128	.310	.316	.265	-.043
13	HAPPY HOME	.094	.155	.225	.345	.225
14	HARD		-.102	-.114	-.221	-.143
15	HI SOC STA	.112	.211	.290	.107	.248
16	NO EMOT PB	-.099	.043	.045	.078	.018
17	PERS SATIS	.657	.612	.570	.620	.497
18	CAUTIOUS		.224	.348	-.075	.091
19	POWFUL AFR	.120	.093	.194	-.041	.335
20	COLORFUL		.258	.221	.250	.316
21	SELF ASSTV	.179	.407	.321	.107	.031
22	CHEERFUL	.000	.254	.234	.244	.039
23	PERSEVERNG	.308	.647	.486	.263	.108
24	ATENTV PPL	.088	.068	.257	.005	.308
25	CONSERVTIV	-.542	.004	.000	-.093	-.029
26	REALST LIF	.262	.394	.444	-.020	.229
27	WISE		.618	.605	.348	.454
28	SOC POPLAR	.013	.254	.177	.182	.431
29	SENSITIVE		.339	.214	.459	.483
30	STRONG		.124	.306	.000	.114
31	SOCIABLE	-.053	.190	.117	.006	.265
32	VALUABLE	.574	.661	.675	.415	.460
33	CONFIDENT	.144	.501	.464	.306	.074
34	PESLY EFFT	.416	.556	.498	.341	.336
35	LIKE TO BE	.374	.317	.050	.305	.044
36	PLYS POKER	-.341				
37	GOOD TASTE	.248				
38	OPTN ADVAN	.017				
39	PLYS CHESS	.530				
40	SUCCESSFUL	.181				
41	PLYS BRIDG	-.038				
42	DEEP					
43	ADAPTL HBT	.278				
44	STABLE					
45	HOT					
46	INTERESTNG					
47	THOUGHTFUL	.597				
48	RATIONAL					

TABLE 64

ROTATED FACTOR LOADINGS

FOR 10 GROUPS ON FACTOR B -- MATERIAL AND SOCIAL SUCCESS

SCALES		GROUP NUMBERS [a]				
No.[a]	Name	20137	A0010	25133	27136	27135
1	WEALTHY	.724	.759	.798	.782	.753
2	INDIVIDIST	-.019	-.142	-.262	-.056	.012
3	PRETY WIFE	.450	.273	.408	.426	.318
4	RESPONSIBL			.144	.204	.202
5	ACTIVE	.207	.405			
6	UNSELFISH	-.116	-.019			
7	CLEANCUT	.317	.388	.373	.365	.277
8	CALM	.145	.129	.090	.082	.046
9	INTRST ART	.030	-.017	-.111	.112	.012
10	OPTIMISTIC	.124	.294	.205	.204	.122
11	INTELLIGNT			.250	.305	.237
12	SELF SUFNT			.046	.150	.096
13	HAPPY HOME	.081	.071	-.005	.157	.058
14	HARD	.319	.146			
15	HI SOC STA	.747	.773	.795	.781	.674
16	NO EMOT PB			.127	.057	.035
17	PERS SATIS	.150	.163	.104	.102	.012
18	CAUTIOUS	.103	.115			
19	POWFUL AFR	.574	.567	.688	.574	.549
20	COLORFUL	.201	.222			
21	SELF ASSTV			.408	.251	.242
22	CHEERFUL			.259	.128	.179
23	PERSEVERNG			.226	.244	.233
24	ATENTV PPL			-.074	-.020	-.065
25	CONSERVTIV	.040	.230	.393	.093	.077
26	REALST LIF			.091	.083	.211
27	WISE	.257	.308			
28	SOC POPLAR	.379	.434	.440	.427	.341
29	SENSITIVE	-.219	-.059			
30	STRONG	.287	.338			
31	SOCIABLE			.255	.173	.173
32	VALUABLE	.189	.373	.028	.186	.152
33	CONFIDENT			.526	.272	.333
34	PESLY EFFT	.387	.488	.364	.324	.189
35	LIKE TO BE	.462	.281	.096	.656	.251
36	PLYS POKER	.046	.121	.383	.034	.237
37	GOOD TASTE	.357	.208	-.005	.361	.200
38	OPTN ADVAN	.580	.634	.755	.756	.666
39	PLYS CHESS	.162	.170	-.039	.297	.178
40	SUCCESSFUL	.501	.632	.660	.674	.637
41	PLYS BRIDG	.167	.222	.433	.268	.264
42	DEEP	.152	.127			
43	ADAPTL HBT			.058	-.021	.064
44	STABLE	.104	.011			
45	HOT	.075	.104			
46	INTERESTNG	.251	.199			
47	THOUGHTFUL			-.032	.074	.054
48	RATIONAL	.097	.249			

[a] See Notes to Tables on pages B-2 and B-3

TABLE 64 -- Continued

SCALES		GROUP NUMBERS				
No.	Name	A0009	A0002	A0005	A0003	A0008
1	WEALTHY	.780	.640	.739	.732	.779
2	INDIVIDIST	-.127	-.010	-.019	-.100	.167
3	PRETY WIFE	.475	.125	.433	.555	.519
4	RESPONSIBL	.312	.202	.208	.193	.229
5	ACTIVE		.141	.234	.331	.370
6	UNSELFISH		-.125	-.229	-.246	-.174
7	CLEANCUT	.332	.169	.262	.238	.254
8	CALM	.140	.233	.033	.080	.041
9	INTRST ART	-.002	.113	.050	.037	.064
10	OPTIMISTIC	.261	.014	.098	.152	.202
11	INTELLIGNT	.410	.285	.283	.327	.395
12	SELF SUFNT	.150	.204	.197	.090	.190
13	HAPPY HOME	-.041	-.061	.009	-.041	-.055
14	HARD		.196	.132	.332	.308
15	HI SOC STA	.767	.728	.738	.788	.797
16	NO EMOT PB	-.054	-.041	.121	-.050	-.053
17	PERS SATIS	.216	.105	.032	.115	.252
18	CAUTIOUS		.234	.092	.115	.016
19	POWFUL AFR	.495	.654	.588	.654	.482
20	COLORFUL		.252	.243	.363	.233
21	SELF ASSTV	.316	.149	.284	.436	.287
22	CHEERFUL	.140	.017	.052	.132	.101
23	PERSEVERNG	.347	.008	.254	.249	.264
24	ATENTV PPL	-.007	.136	.084	.110	-.056
25	CONSERVTIV	.236	.090	.148	.071	-.078
26	REALST LIF	.166	.142	.136	.217	.127
27	WISE		.222	.199	.385	.224
28	SOC POPLAR	.429	.404	.500	.588	.348
29	SENSITIVE		-.065	-.162	.016	-.055
30	STRONG		.229	.277	.386	.278
31	SOCIABLE	.255	.201	.260	.366	.156
32	VALUABLE	.280	.205	.215	.306	.210
33	CONFIDENT	.411	.174	.329	.334	.226
34	PESLY EFFT	.282	.320	.400	.375	.305
35	LIKE TO BE	.151	.387	.456	.427	.240
36	PLYS POKER	.203				
37	GOOD TASTE	.285				
38	OPTN ADVAN	.683				
39	PLYS CHESS	.130				
40	SUCCESSFUL	.655				
41	PLYS BRIDG	.198				
42	DEEP					
43	ADAPTL HBT	.098				
44	STABLE					
45	HOT					
46	INTERESTNG					
47	THOUGHTFUL	.057				
48	RATIONAL					

TABLE 65

ROTATED FACTOR LOADINGS

FOR 10 GROUPS ON FACTOR C -- CHEERFUL SOCIABILITY

SCALES No.[a]	Names	GROUP NUMBERS [a] 20137	A0010	25133	27136	27135
1	WEALTHY	.120	.162	.095	.064	.130
2	INDIVIDIST	-.068	-.011	-.102	.000	-.142
3	PRETY WIFE	.265	.513	.440	.195	.451
4	RESPONSIBL			.130	.165	.211
5	ACTIVE	.184	.101			
6	UNSELFISH	.156	.115			
7	CLEANCUT	.405	.275	.367	.360	.517
8	CALM	.062	.021	-.003	.265	.098
9	INTRST ART	.171	.171	.033	.080	.162
10	OPTIMISTIC	.115	.170	.436	.636	.356
11	INTELLIGNT			-.008	-.062	.059
12	SELF SUFNT			-.033	.061	-.032
13	HAPPY HOME	.487	.151	.012	.356	.206
14	HARD	-.033	.057			
15	HI SOC STA	.149	.121	.068	.043	.137
16	NO EMOT PB			.103	.240	.064
17	PERS SATIS	.100	-.029	.044	.166	.091
18	CAUTIOUS	.191	-.077			
19	POWFUL AFR	.046	.238	.198	.222	.114
20	COLORFUL	.128	.275			
21	SELF ASSTV			.405	.163	.181
22	CHEERFUL			.477	.658	.484
23	PERSEVERNG			.125	.049	.086
24	ATENTV PPL			.470	.554	.618
25	CONSERVTIV	.236	-.026	.129	.080	.099
26	REALST LIF			.157	.209	.207
27	WISE	.082	-.021			
28	SOC POPLAR	.487	.266	.520	.353	.414
29	SENSITIVE	.053	-.028			
30	STRONG	.193	.159			
31	SOCIABLE			.708	.607	.671
32	VALUABLE	.158	-.127	.000	.035	.053
33	CONFIDENT			.403	.335	.248
34	PESLY EFFT	.212	-.040	.365	.319	.358
35	LIKE TO BE	.040	.063	-.090	-.049	.115
36	PLYS POKER	.331	.066	.256	-.006	.110
37	GOOD TASTE	.335	.449	.211	.347	.445
38	OPTN ADVAN	.165	.028	.072	.054	.092
39	PLYS CHESS	.079	.089	.006	-.138	-.025
40	SUCCESSFUL	.376	.038	.115	.116	.134
41	PLYS BRIDG	.388	.104	.314	.022	.079
42	DEEP	-.056	.041			
43	ADAPTL HBT			.415	.403	.455
44	STABLE	.053	.098			
45	HOT	.036	.169			
46	INTERESTNG	.053	.206			
47	THOUGHTFUL			-.063	.261	.194
48	RATIONAL	-.041	-.132			

[a] See Notes to Tables on pages B-2 and B-3

TABLE 65 -- Continued

SCALES No.	Name	GROUP NUMBERS A0009	A0002	A0005	A0003	A0008
1	WEALTHY	.101	.190	.076	.017	.084
2	INDIVIDIST	-.197	-.170	-.120	-.159	-.090
3	PRETY WIFE	.353	.470	.296	.199	.291
4	RESPONSIBL	.206	.263	.405	.174	.125
5	ACTIVE		.525	.545	.302	.536
6	UNSELFISH		.112	.288	.235	.086
7	CLEANCUT	.511	.597	.571	.541	.588
8	CALM	.133	.028	.163	.257	.040
9	INTRST ART	.099	.013	-.035	.041	.036
10	OPTIMISTIC	.293	.400	.369	.269	.445
11	INTELLIGNT	.024	.052	.039	-.124	-.064
12	SELF SUFNT	-.011	.009	.023	.081	.020
13	HAPPY HOME	.107	.253	.253	.380	.214
14	HARD		.101	.096	.031	.167
15	HI SOC STA	.251	.248	.141	.037	.140
16	NO EMOT PB	.139	.089	.135	.344	.199
17	PERS SATIS	.203	.136	.154	.029	.106
18	CAUTIOUS		.040	.192	.151	-.014
19	POWFUL AFR	.443	.289	.318	.160	.281
20	COLORFUL		.285	.376	.097	.387
21	SELF ASSTV	.178	.291	.309	.132	.362
22	CHEERFUL	.414	.420	.648	.558	.536
23	PERSEVERNG	.079	.228	.121	.108	.201
24	ATENTV PPL	.612	.519	.707	.673	.575
25	CONSERVTIV	.221	.088	.167	.234	.032
26	REALST LIF	.186	.213	.448	.322	.194
27	WISE		.142	.278	.092	.062
28	SOC POPLAR	.606	.428	.489	.391	.388
29	SENSITIVE		.020	.092	.205	.088
30	STRONG		.291	.502	.256	.374
31	SOCIABLE	.641	.632	.733	.641	.623
32	VALUABLE	.121	.082	.277	.055	.115
33	CONFIDENT	.268	.314	.270	.056	.313
34	PESLY EFFT	.360	.200	.280	.142	.310
35	LIKE TO BE	.253	.014	.134	-.041	.032
36	PLYS POKER	.182				
37	GOOD TASTE	.404				
38	OPTN ADVAN	.029				
39	PLYS CHESS	-.091				
40	SUCCESSFUL	.249				
41	PLYS BRIDG	.102				
42	DEEP					
43	ADAPTL HBT	.146				
44	STABLE					
45	HOT					
46	INTERESTNG					
47	THOUGHTFUL	.270				
48	RATIONAL					

TABLE 66

ROTATED FACTOR LOADINGS

FOR 10 GROUPS ON FACTOR D -- PERSONAL CONTROL

SCALES No.[a]	Names	GROUP NUMBERS[a] 20137	A0010	25133	27136	27135
1	WEALTHY	.210	-.035	.098	.092	.102
2	INDIVIDIST	-.395	-.135	-.149	-.148	-.118
3	PRETY WIFE	-.126	-.058	-.060	-.101	-.005
4	RESPONSIBL			.239	.593	.367
5	ACTIVE	-.040	.034			
6	UNSELFISH	.146	.401			
7	CLEANCUT	.379	.200	.359	.321	.313
8	CALM	.666	.470	.619	.555	.582
9	INTRST ART	-.327	.120	-.075	-.166	-.110
10	OPTIMISTIC	.179	.227	.384	.307	.325
11	INTELLIGNT			.019	.249	.147
12	SELF SUFNT			.361	.431	.439
13	HAPPY HOME	.212	.406	.457	.390	.337
14	HARD	.154	-.212			
15	HI SOC STA	.112	.141	.055	.092	.005
16	NO EMOT PB			.591	.548	.456
17	PERS SATIS	-.118	.119	.102	.028	-.051
18	CAUTIOUS	.688	.481			
19	POWFUL AFR	.066	.207	.125	.104	.061
20	COLORFUL	-.346	-.008			
21	SELF ASSTV			-.108	.004	-.022
22	CHEERFUL			.423	.364	.328
23	PERSEVERNG			.026	.280	.207
24	ATENTV PPL			.131	.177	.125
25	CONSERVTIV	.584	.354	.148	.279	.184
26	REALST LIF			.331	.431	.365
27	WISE	.198	.409			
28	SOC POPLAR	.174	.183	.032	.038	.145
29	SENSITIVE	-.254	.139			
30	STRONG	.257	.108			
31	SOCIABLE			.014	.052	-.014
32	VALUABLE	.147	.245	.049	.215	.110
33	CONFIDENT			.279	.288	.261
34	PESLY EFFT	-.029	.221	.033	.183	.132
35	LIKE TO BE	.044	.095	.034	.078	.005
36	PLYS POKER	.008	-.282	.050	-.125	-.002
37	GOOD TASTE	-.083	.108	-.044	.041	.021
38	OPTN ADVAN	.200	.013	.093	.094	.125
39	PLYS CHESS	-.141	.059	.019	.188	.132
40	SUCCESSFUL	.249	.102	.115	.234	.085
41	PLYS BRIDG	.066	.127	.094	.141	.019
42	DEEP	-.165	.150			
43	ADAPTL HBT			.072	.139	.322
44	STABLE	.651	.470			
45	HOT	-.429	-.055			
46	INTERESTNG	-.255	.201			
47	THOUGHTFUL			.098	.133	.260
48	RATIONAL	.477	.353			

[a] See Notes to Table on pages B-2 and B-3

TABLE 66 -- Continued

SCALE No.	SCALE Name	GROUP NUMBERS A0009	A0002	A0005	A0003	A0008
1	WEALTHY	.086	-.005	.054	.099	-.006
2	INDIVIDIST	-.038	.014	-.011	.065	.188
3	PRETY WIFE	-.010	.018	.260	-.126	-.089
4	RESPONSIBL	.651	.374	.186	.360	.443
5	ACTIVE		.073	.042	.011	.114
6	UNSELFISH		.549	.267	.342	.619
7	CLEANCUT	.431	.312	.319	.170	.139
8	CALM	.687	.500	.472	.525	.542
9	INTRST ART	.027	.154	.025	-.043	.011
10	OPTIMISTIC	.314	.093	.190	.164	.310
11	INTELLIGNT	.371	.170	.139	.125	.355
12	SELF SUFNT	.604	.421	.236	.092	.519
13	HAPPY HOME	.606	.486	.658	.094	.573
14	HARD		.055	-.161	-.120	-.209
15	HI SOC STA	.122	-.017	.045	.187	.122
16	NO EMOT PB	.686	.564	.603	.409	.616
17	PERS SATIS	.183	.188	.047	.107	.410
18	CAUTIOUS		.418	.306	.447	.299
19	POWFUL AFR	.145	.118	.056	.174	.080
20	COLORFUL		.051	.052	-.016	-.036
21	SELF ASSTV	.329	-.071	-.008	-.038	.089
22	CHEERFUL	.642	.418	.327	.175	.380
23	PERSEVERNG	.494	.159	.076	.288	.247
24	ATENTV PPL	.387	.459	.121	.208	.233
25	CONSERVTIV	.140	.290	.326	.055	.148
26	REALST LIF	.594	.499	.133	.458	.368
27	WISE		.395	.097	.466	.385
28	SOC POPLAR	.220	.128	.206	.124	.039
29	SENSITIVE		.043	-.187	.047	.078
30	STRONG		.296	.022	.300	.158
31	SOCIABLE	.316	.166	.125	.112	.000
32	VALUABLE	.389	.246	.048	.485	.371
33	CONFIDENT	.492	.152	.123	.128	.268
34	PESLY EFFT	.362	.181	.014	.382	.299
35	LIKE TO BE	.170	.092	.055	.206	.039
36	PLYS POKER	-.019				
37	GOOD TASTE	.183				
38	OPTN ADVAN	.189				
39	PLYS CHESS	.165				
40	SUCCESSFUL	.310				
41	PLYS BRIDG	.180				
42	DEEP					
43	ADAPTL HBT	.358				
44	STABLE					
45	HOT					
46	INTERESTNG					
47	THOUGHTFUL	.367				
48	RATIONAL					

TABLE 67

ROTATED FACTOR LOADINGS

FOR 10 GROUPS ON FACTOR E -- STRONG CONFIDENCE

SCALES No.[a]	Name	GROUP NUMBERS[a] 20137	A0010	25133	27136	27135
1	WEALTHY	.080	.115	.143	.104	.051
2	INDIVIDIST	.019	-.170	.155	.024	.114
3	PRETY WIFE	.087	.003	.048	-.054	-.069
4	RESPONSIBL			.065	.277	.474
5	ACTIVE	.613	-.049			
6	UNSELFISH	.131	-.078			
7	CLEANCUT	.151	.259	-.076	-.049	.079
8	CALM	.151	.387	-.064	.046	.105
9	INTRST ART	.094	-.438	-.032	-.058	-.033
10	OPTIMISTIC	.552	.139	.276	.146	.400
11	INTELLIGNT			.027	.276	.391
12	SELF SUFNT			.200	.147	.203
13	HAPPY HOME	.111	.135	.005	-.076	.156
14	HARD	.005	.261			
15	HI SOC STA	.027	-.068	.069	.121	.180
16	NO EMOT PB			.000	-.084	.051
17	PERS SATIS	.164	-.210	.290	.270	.356
18	CAUTIOUS	-.062	.288			
19	POWFUL AFR	.118	.145	-.059	.122	.129
20	COLORFUL	.444	-.064			
21	SELF ASSTV			.466	.436	.379
22	CHEERFUL			.240	.040	.394
23	PERSEVERNG			.461	.413	.549
24	ATENTV PPL			-.063	.162	.327
25	CONSERVTIV	.024	.242	-.087	-.004	-.007
26	REALST LIF			.221	.179	.456
27	WISE	.182	.028			
28	SOC POPLAR	.220	.188	.023	.119	.175
29	SENSITIVE	-.003	-.505			
30	STRONG	.428	.259			
31	SOCIABLE			.109	.220	.276
32	VALUABLE	.177	-.048	.115	.302	.418
33	CONFIDENT			.373	.471	.565
34	PESLY EFFT	.219	-.060	.136	.298	.346
35	LIKE TO BE	.154	-.233	.094	.074	.098
36	PLYS POKER	.114	.143	-.058	.093	.045
37	GOOD TASTE	.117	-.046	-.089	-.125	-.015
38	OPTN ADVAN	.176	.152	.229	.099	.200
39	PLYS CHESS	-.045	-.513	-.080	-.073	-.048
40	SUCCESSFUL	.144	.023	.217	.202	.334
41	PLYS BRIDG	.025	-.349	-.186	.051	-.006
42	DEEP	.219	-.210			
43	ADAPTL HBT			.060	.036	.065
44	STABLE	.047	.321			
45	HOT	.281	-.107			
46	INTERESTNG	.406	-.167			
47	THOUGHTFUL			-.022	.211	.309
48	RATIONAL	.042	.179			

[a] See Notes to Tables on pages B-2 and B-3

TABLE 67 -- Continued

SCALES No.	Name	GROUP NUMBERS A0009	A0002	A0005	A0003	A0008
1	WEALTHY	-.042	.402	.281	.272	.155
2	INDIVIDIST	.168	.039	.093	.142	.216
3	PRETY WIFE	-.133	.088	-.088	.132	.176
4	RESPONSIBL	.143	.281	.316	.457	.157
5	ACTIVE		.264	.209	.499	.236
6	UNSELFISH		-.216	-.126	.082	-.036
7	CLEANCUT	-.042	.145	.194	.341	.044
8	CALM	.000	.105	.120	.091	.075
9	INTRST ART	-.141	-.322	-.247	-.108	.045
10	OPTIMISTIC	.279	.187	.130	.386	.204
11	INTELLIGNT	.092	.278	.332	.343	.404
12	SELF SUFNT	.051	.206	.223	.403	.182
13	HAPPY HOME	-.110	.084	.000	.308	.059
14	HARD		.444	.496	.460	.428
15	HI SOC STA	-.100	.232	.205	.192	.165
16	NO EMOT PB	.042	.069	.073	.093	.080
17	PERS SATIS	.078	.000	.000	.262	.185
18	CAUTIOUS		-.035	.232	-.094	.060
19	POWFUL AFR	-.100	.126	.211	.122	.112
20	COLORFUL		.046	.039	.155	.279
21	SELF ASSTV	.236	.304	.251	.451	.441
22	CHEERFUL	.149	.164	.196	.366	.255
23	PERSEVERNG	.260	.289	.248	.436	.507
24	ATENTV PPL	.085	-.136	-.059	.051	.082
25	CONSERVTIV	-.115	-.029	-.115	.000	.010
26	REALST LIF	.208	.167	.295	.415	.419
27	WISE		.213	.404	.283	.500
28	SOC POPLAR	-.061	.098	.069	.106	.205
29	SENSITIVE		-.404	-.348	-.094	-.025
30	STRONG		.488	.341	.422	.566
31	SOCIABLE	.071	.003	-.010	.064	.151
32	VALUABLE	.029	.240	.260	.279	.458
33	CONFIDENT	.313	.372	.425	.568	.572
34	PESLY EFFT	.144	.242	.144	.309	.252
35	LIKE TO BE	-.073	.232	.211	.216	.101
36	PLYS POKER	-.118				
37	GOOD TASTE	-.088				
38	OPTN ADVAN	-.014				
39	PLYS CHESS	-.344				
40	SUCCESSFUL	.051				
41	PLYS BRIDG	-.396				
42	DEEP					
43	ADAPTL HBT	.137				
44	STABLE					
45	HOT					
46	INTERESTNG					
47	THOUGHTFUL	.152				
48	RATIONAL					

TABLE 68

ROTATED FACTOR LOADINGS

FOR 10 GROUPS ON FACTOR F -- CONSERVATISM

SCALES No.[a]	Name	GROUP NUMBERS [a] 20137	 A0010	 25133	 27136	 27135
1	WEALTHY	.017	.103	.110	.124	.050
2	INDIVIDIST	-.247	.008	-.201	-.331	-.595
3	PRETY WIFE	.125	.124	.005	.318	-.033
4	RESPONSIBL			.684	.221	.275
5	ACTIVE	-.047	-.103			
6	UNSELFISH	.230	-.150			
7	CLEANCUT	.354	.305	.271	.477	.310
8	CALM	.140	.000	.264	.099	.168
9	INTRST ART	-.121	.121	-.156	.157	-.155
10	OPTIMISTIC	.127	-.150	-.029	-.008	-.110
11	INTELLIGNT			.400	.086	.075
12	SELF SUFNT			.167	-.073	.076
13	HAPPY HOME	.154	.147	.176	.300	.209
14	HARD	-.332	.217			
15	HI SOC STA	-.039	.169	.024	.146	.128
16	NO EMOT PB			-.104	-.028	-.044
17	PERS SATIS	.000	.043	.093	-.015	-.149
18	CAUTIOUS	.133	.352			
19	POWFUL AFR	.020	-.004	.051	.203	.090
20	COLORFUL	-.034	-.035			
21	SELF ASSTV			.038	.003	-.206
22	CHEERFUL			.037	.073	.087
23	PERSEVERNG			.180	.026	-.083
24	ATENTV PPL			.455	.388	.149
25	CONSERVTIV	.276	.251	.187	.405	.633
26	REALST LIF			.486	.192	.078
27	WISE	.053	.242			
28	SOC POPLAR	.091	.288	.062	.430	.248
29	SENSITIVE	.172	-.161			
30	STRONG	-.103	.207			
31	SOCIABLE			.278	.421	.279
32	VALUABLE	-.065	.281	.321	.157	.080
33	CONFIDENT			.127	.092	.066
34	PESLY EFFT	.154	.056	.389	.160	.010
35	LIKE TO BE	-.048	-.047	.025	.047	-.026
36	PLYS POKER	.017	.247	-.207	.195	.263
37	GOOD TASTE	.212	.186	.072	.177	-.027
38	OPTN ADVAN	-.200	.254	.079	-.066	.031
39	PLYS CHESS	-.250	.268	.002	.092	-.059
40	SUCCESSFUL	-.202	.252	.230	.040	.104
41	PLYS BRIDG	-.051	.410	-.082	.328	.364
42	DEEP	-.043	.134			
43	ADAPTL HBT			.061	-.045	-.063
44	STABLE	.182	.124			
45	HOT	.268	-.296			
46	INTERESTNG	.116	-.035			
47	THOUGHTFUL			.310	.156	-.124
48	RATIONAL	-.109	.091			

[a] See Notes to Tables on pages B-2 and B-3

TABLE 68 -- Continued

SCALES No.	Name	GROUP NUMBERS A0009	A0002	A0005	A0003	A0008
1	WEALTHY	-.050	.104	.090	.153	.023
2	INDIVIDIST	-.334	-.580	-.525	-.552	-.472
3	PRETY WIFE	-.360	-.043	-.134	.055	-.023
4	RESPONSIBL	.110	.401	.314	.422	.450
5	ACTIVE		-.148	-.122	-.154	-.078
6	UNSELFISH		-.069	.109	-.064	.122
7	CLEANCUT	.060	.288	.258	.196	.310
8	CALM	.059	.231	.185	.198	.191
9	INTRST ART	-.204	-.382	-.333	-.341	-.143
10	OPTIMISTIC	-.120	.011	-.166	.090	-.066
11	INTELLIGNT	.000	-.112	-.170	.092	-.032
12	SELF SUFNT	-.058	.104	.013	.165	-.061
13	HAPPY HOME	.028	.013	.000	.247	.062
14	HARD		-.093	-.115	-.077	-.072
15	HI SOC STA	.040	.051	-.066	.042	.045
16	NO EMOT PB	-.068	.059	-.004	.006	.099
17	PERS SATIS	-.108	-.341	-.378	-.176	-.086
18	CAUTIOUS		.538	.311	.435	.684
19	POWFUL AFR	.014	-.074	-.084	-.116	-.112
20	COLORFUL		-.552	-.564	-.552	-.425
21	SELF ASSTV	-.380	-.396	-.502	-.318	-.341
22	CHEERFUL	-.078	-.107	-.093	.100	.003
23	PERSEVERNG	-.092	-.047	-.081	-.030	.028
24	ATENTV PPL	.000	.061	.190	.033	.044
25	CONSERVTIV	.288	.660	.513	.661	.689
26	REALST LIF	-.108	-.009	.116	-.016	.089
27	WISE		.028	-.001	-.087	.033
28	SOC POPLAR	-.153	.039	.007	.039	.073
29	SENSITIVE		-.114	-.049	-.233	.051
30	STRONG		-.093	-.081	-.212	-.057
31	SOCIABLE	-.163	.150	.125	-.047	.043
32	VALUABLE	.160	.000	.039	-.116	.072
33	CONFIDENT	-.158	-.078	-.092	.188	-.034
34	PESLY EFFT	.037	-.008	.014	-.123	-.088
35	LIKE TO BE	-.175	-.104	.040	-.226	-.080
36	PLYS POKER	-.270				
37	GOOD TASTE	-.290				
38	OPTN ADVAN	-.156				
39	PLYS CHESS	-.038				
40	SUCCESSFUL	-.056				
41	PLYS BRIDG	-.095				
42	DEEP					
43	ADAPTL HBT	-.383				
44	STABLE					
45	HOT					
46	INTERESTNG					
47	THOUGHTFUL	.027				
48	RATIONAL					

Table 69

ROTATED FACTOR LOADINGS ON SIX FACTORS FOR HIGH SCHOOL GROUP[a]

Scales		Factors					
No.[a]	Name	A	B	C	F	D	E
01	WEALTHY	-.088	.630	.159	-.078	-.023	.076
02	INDIVIDIST	.321	-.036	.075	-.312	.032	-.256
03	PRETY WIFE	-.223	.363	.308	-.269	-.108	-.005
04	RESPONSIBL	.326	.277	.018	.254	.431	.333
05	ACTIVE	.234	.300	.371	-.044	-.021	.223
06	UNSELFISH	.313	.055	.234	.188	.452	.071
07	CLEANCUT	.023	.267	.377	.116	.102	.384
08	CALM	.111	.078	.202	.198	.471	.058
09	INTRST ART	.042	.048	.213	-.188	.134	-.401
10	OPTIMISTIC	.356	.078	.339	-.030	.011	.050
11	INTELLIGNT	.322	.448	.078	.069	.406	.000
12	SELF SUFNT	.445	.109	.107	.148	.158	.044
13	HAPPY HOME	.145	.050	.287	-.014	.506	.258
14	HARD	.115	.172	-.173	-.204	.039	.211
15	HI SOC STA	.057	.735	.313	.015	.000	.051
16	NO EMOT PB	.039	-.045	.273	.026	.497	.218
17	PERS SATIS	.404	.273	.244	-.120	.192	-.173
18	CAUTIOUS	.254	.102	.099	.317	.465	.000
19	POWFUL AFR	.159	.481	.197	-.066	.131	.074
20	COLORFUL	.068	.213	.496	-.372	.110	-.075
21	SELF ASSTV	.425	.109	.243	-.161	-.069	.107
22	CHEERFUL	.119	.075	.493	-.037	.363	.218
23	PERSEVERNG	.500	.213	.212	.099	.192	.056
24	ATENTV PPL	.197	.083	.469	.176	.244	.227
25	CONSERVTIV	.000	.000	.109	.378	.327	.101
26	REALST LIF	.349	.136	.260	.197	.410	.100
27	WISE	.381	.413	.092	.145	.513	.091
28	SOC POPLAR	-.042	.489	.521	.025	.107	.137
29	SENSITIVE	.051	-.065	.145	.127	-.069	-.306
30	STRONG	.281	.273	.259	-.141	.352	.329
31	SOCIABLE	.101	.381	.500	.116	.035	.215
32	VALUABLE	.426	.346	.104	.015	.489	.014
33	CONFIDENT	.325	.301	.187	-.038	.357	.251
34	PESLY EFFT	.423	.309	.210	-.050	.305	.084
35	LIKE TO BE	.168	.210	.139	-.158	.090	.108

[a] See Notes to Tables on p. B-3.

Table 70

ROTATED FACTOR LOADINGS ON SIX FACTORS FOR 39 GROUPS--SEVEN SCALES

Sampling Units		Factors					
No.[a]	Code	1	2	3	4	5	6
1	EPrMLA-AFr58	.961	.113	.019	.084	-.034	-.108
2	EPrMLA-ASr58	.955	.141	.035	.141	-.036	-.060
3	EPrFLAFr	.971	.058	.109	.014	-.115	.041
4	EPrFLASr	.969	.108	.110	.060	-.086	-.001
5	EPrMLA-BFr	.969	.125	.064	.072	-.042	-.076
6	EPrMLA-BSr	.973	.092	.055	.143	-.020	-.044
7	EPbMLAFr	.974	-.006	-.086	-.001	-.077	.031
8	EPbMLASr	.977	.042	-.078	.060	.011	.004
9	EPbFLAFr	.967	.034	.051	-.070	-.165	.082
10	EPbFLASr	.972	.085	.036	-.001	-.057	.088
11	WPrMLAFr	.976	.059	.081	.067	.066	-.002
12	WPrMLASr	.967	.071	.087	.109	.115	-.009
13	WPrFLAFr	.968	.074	.174	-.004	-.022	.062
14	WPrFLASr	.975	.051	.133	.052	.050	.069
15	WPbMLAFr	.966	-.001	-.048	-.090	.083	-.048
16	WPbMLASr	.980	.005	-.102	.037	.057	.041
17	WPbFLAFr	.971	.006	-.023	-.144	-.081	-.006

[a] See Table 5, pp. 34 and 35.

Table 70--Continued

Sampling Units		Factors					
No.[a]	Code	1	2	3	4	5	6
18	WPbFLASr	.978	.052	.025	-.025	-.088	.085
19	WPbMBAFr	.908	-.036	-.308	-.023	-.061	.034
20	WPbMBASr	.893	.014	-.343	.049	.049	-.010
21	WPbMTEFr	.958	-.043	-.045	-.155	.036	.007
22	WPbMTESr	.922	.060	-.090	-.125	.208	.039
23	WPbFTEFr	.970	-.021	.005	-.165	-.035	-.006
24	WPbFTESr	.954	.009	-.074	-.181	.057	-.033
25	WPbMERFr	.951	-.055	-.119	-.022	.063	-.030
26	WPbMERSr	.949	-.004	-.179	.027	.090	.003
27	HSMCB10	.881	-.418	.038	-.098	.038	-.021
28	HSMNCB10	.640	-.689	-.012	.040	.021	-.078
29	HSMCB12	.944	-.245	-.057	-.061	.037	.005
30	HSMNCB12	.812	-.449	-.056	.001	.089	.081
31	HSFCB10	.893	-.352	.040	-.176	-.033	.036
32	HSFNCB10	.697	-.645	.035	-.003	-.025	.014
33	HSFCB12	.944	-.152	.038	-.237	-.031	.043
34	HSFNCB12	.823	-.493	-.007	-.015	-.099	.113
35	EPrMLA-AFr62	.971	.100	.120	.048	-.022	-.091
36	EPrMLA-ASr62	.957	.039	.113	.171	.088	-.046
37	EPrMLA-AFr62DO	.946	.157	.114	.073	.007	-.160
38	EPrMLA-AFac	.918	.094	-.076	.284	-.036	.030
39	WPbCLA-BSpec	.939	.099	-.071	.014	.015	.031

NOTES TO TABLES 71 THROUGH 83

1. Scales numbered 01 through 35 in all tables are listed in Table 2, p. 15, and the scales numbered 36 through 48 are listed in Table 1, pp. 12 and 13. The scales numbered 49 through 65 used in Tables 82 and 83 are listed in Table 50, p. 193.

2. Occupation numbers for the special occupation list used in Table 75 are identified in Table 22, p. 81. The occupation numbers in Table 76 are identified in Table 24, p. 83. The occupation titles for the Women's Study, Tables 82 and 83, are listed in Table 49, p. 191.

3. Approximately half of the scale scores in Tables 71 through 83 have been converted so that the "desirable" ends of all scales have a value of 1.0 and the "undesirable" ends a value of 7.0. In general, the lower the score of an occupation the more it shares in a desirable attribute such as wealth, optimism, etc. For a few scales the assignment of a desirable end was arbitrary (e.g., soft--hard or conservative--radical). The tables are arranged so that the lower the tabulated value the more applicable the scale term located at the left of the table to the occupation in question. The average scale score is to one decimal place in these tables and the decimal is omitted.

TABLE 71

AVERAGE PROFILE[a]

MIDWESTERN PUBLIC UNIV.,MALES,FRESH + SENIORS POOLED

SCALE	OCCUPATION 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
01 WEALTHY	35	50	19	38	18	26	26	21	38	33	36	34	48	33	51
02 INDIVIDIST	51	18	49	27	41	41	46	38	52	47	51	49	43	23	38
03 PRETY WIFE	38	38	28	39	31	35	33	30	36	34	37	34	40	41	41
04 RESPONSIBL	23	47	22	22	17	23	24	20	26	26	25	27	23	24	23
05 ACTIVE	42	34	26	28	25	31	27	23	36	31	34	29	31	29	26
06 UNSELFISH	42	42	47	32	28	39	43	38	43	38	45	44	30	35	21
07 CLEANCUT	30	53	23	37	24	29	28	22	28	25	29	26	29	42	30
08 CALM	31	53	39	36	23	33	38	31	39	31	40	41	35	35	29
09 INTRST ART	44	13	39	27	32	42	44	33	45	40	46	44	30	35	36
10 OPTIMISTIC	39	43	28	34	27	31	33	29	36	31	33	30	32	29	26
11 INTELLIGNT	27	27	24	15	16	19	27	17	32	29	33	31	23	14	26
12 SELF SUFNT	32	39	33	30	24	29	33	30	36	34	35	36	34	27	28
13 HAPPY HOME	37	44	40	32	34	35	38	34	37	35	37	39	31	37	32
14 HARD	43	45	32	39	39	33	31	30	37	38	37	34	43	36	47
15 HI SOC STA	36	46	20	27	16	27	29	18	38	33	39	35	38	26	44
16 NO EMOT PB	39	51	43	39	35	38	40	36	41	37	41	42	37	39	35
17 PERS SATIS	40	19	31	20	18	28	34	22	39	32	40	37	22	18	20
18 CAUTIOUS	26	53	33	36	25	33	33	29	32	32	30	35	30	33	31
19 POWFUL AFR	44	57	25	33	29	40	34	19	44	38	44	41	41	40	43
20 COLORFUL	48	22	34	28	28	38	37	25	46	37	44	37	37	36	38
21 SELF ASSTV	42	29	24	27	25	30	27	21	34	30	33	29	33	31	31
22 CHEERFUL	39	47	33	34	29	33	35	32	36	31	34	31	31	37	26
23 PERSEVERNG	28	32	24	24	20	24	26	20	31	29	30	26	27	18	22
24 ATENTV PPL	40	47	30	29	20	40	32	21	31	23	27	25	22	46	17
25 CONSERVTIV	27	57	28	46	29	34	31	35	30	30	30	32	35	44	38
26 REALST LIF	36	45	32	28	21	32	32	23	35	31	35	34	31	32	24
27 WISE	34	39	30	23	22	29	31	22	35	31	36	33	29	24	30
28 SOC POPLAR	37	41	25	29	21	31	31	23	35	30	34	31	31	36	33
29 SENSITIVE	40	21	43	31	30	40	42	36	41	37	41	41	30	34	28
30 STRONG	42	43	30	34	26	32	30	26	37	33	38	34	37	34	34
31 SOCIABLE	36	43	22	30	23	34	29	21	30	26	28	25	28	43	24
32 VALUABLE	30	32	27	17	16	21	29	21	34	30	34	33	19	17	22
33 CONFIDENT	33	39	24	27	20	26	27	20	33	29	33	27	30	26	28
34 PESLY EFFT	36	38	26	22	18	28	29	21	35	29	35	33	27	26	27
35 LIKE TO BE	52	42	32	27	26	37	39	28	48	39	52	49	37	30	42
36 PLYS POKER	35	45	30	41	39	33	32	35	31	34	32	30	41	44	45
37 GOOD TASTE	38	32	30	34	28	36	35	25	37	31	36	35	35	38	36
38 OPTN ADVAN	33	46	25	34	26	21	26	22	35	28	40	30	44	23	47
39 PLYS CHESS	38	35	40	28	32	36	41	31	45	40	47	44	35	26	39
40 SUCCESSFUL	31	41	21	24	17	23	26	20	34	27	32	30	31	23	33
41 PLYS BRIDG	35	43	30	28	31	36	38	30	36	33	39	36	30	33	37
42 DEEP	42	24	37	24	24	33	38	27	44	35	44	42	34	23	30
43 ADAPTL HBT	43	34	36	33	36	34	37	30	38	33	39	35	34	33	28
44 STABLE	29	56	37	39	28	37	40	34	35	34	39	38	35	48	34
45 HOT	44	34	41	40	38	40	44	36	41	38	41	40	39	39	35
46 INTERESTNG	47	28	34	26	25	33	36	26	44	33	43	38	32	28	32
47 THOUGHTFUL	37	28	35	21	24	32	33	23	37	30	38	38	25	23	21
48 RATIONAL	29	51	34	31	29	28	32	26	36	33	37	35	33	27	36

[a] See Notes to Tables on page B-18

TABLE 72

AVERAGE PROFILE[a]

MIDWESTERN PUBLIC UNIV.,FEMALES,FRESH + SENIORS POOLED

SCALE	OCCUPATION														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
01 WEALTHY	35	53	19	42	19	25	28	18	42	35	37	37	51	36	51
02 INDIVIDIST	51	14	46	23	35	37	48	31	50	40	50	47	42	18	31
03 PRETY WIFE	38	37	27	40	31	34	35	29	38	34	38	36	39	42	42
04 RESPONSIBL	20	46	20	19	13	20	22	16	24	20	23	25	20	21	18
05 ACTIVE	40	32	23	24	19	27	29	18	35	28	31	31	25	26	20
06 UNSELFISH	37	43	44	29	21	36	41	34	39	34	41	42	24	28	19
07 CLEANCUT	29	53	21	36	21	25	28	21	27	23	28	26	27	45	27
08 CALM	31	54	39	38	19	32	36	33	35	27	36	37	34	37	23
09 INTRST ART	41	11	36	23	30	37	45	30	46	37	43	43	28	33	35
10 OPTIMISTIC	37	43	30	34	23	30	33	26	36	27	34	29	29	29	23
11 INTELLIGNT	24	25	22	14	13	18	29	15	31	26	33	31	21	15	22
12 SELF SUFNT	30	37	32	30	21	24	33	28	36	28	36	35	28	20	23
13 HAPPY HOME	34	44	39	29	32	32	35	33	34	32	36	35	28	35	27
14 HARD	40	44	31	39	38	33	29	28	36	36	35	36	43	33	45
15 HI SOC STA	36	47	18	28	14	24	31	16	40	32	37	36	38	29	43
16 NO EMOT PB	41	52	45	40	37	39	42	40	41	39	42	42	40	41	37
17 PERS SATIS	40	17	32	19	14	26	36	20	42	31	39	38	19	18	16
18 CAUTIOUS	25	54	33	37	21	30	33	28	32	29	29	36	30	31	27
19 POWFUL AFR	43	57	23	33	27	35	34	16	45	38	41	42	37	41	40
20 COLORFUL	44	18	31	27	25	33	40	23	44	37	41	38	34	30	31
21 SELF ASSTV	40	29	21	26	22	26	26	17	31	28	32	28	32	26	27
22 CHEERFUL	37	45	33	33	24	33	32	31	34	26	32	31	29	39	23
23 PERSEVERNG	26	28	20	21	15	21	24	14	30	25	27	26	24	16	18
24 ATENTV PPL	38	43	29	25	14	37	32	17	28	17	27	24	19	46	13
25 CONSERVTIV	27	58	30	45	30	37	35	39	30	31	31	33	33	46	35
26 REALST LIF	34	42	31	25	17	28	30	21	33	27	33	31	29	29	18
27 WISE	30	38	29	21	17	25	31	19	34	29	34	33	25	20	23
28 SOC POPLAR	33	41	20	27	18	29	31	20	33	27	31	30	30	37	30
29 SENSITIVE	36	18	42	30	26	37	45	34	41	36	41	39	28	30	25
30 STRONG	39	39	27	29	19	27	28	22	35	31	36	33	32	29	25
31 SOCIABLE	34	45	20	30	22	31	29	19	29	20	26	24	26	43	23
32 VALUABLE	28	26	25	16	12	21	28	17	32	27	31	32	17	14	18
33 CONFIDENT	30	37	22	24	17	24	27	15	29	23	28	27	26	25	25
34 PESLY EFFT	35	34	25	23	15	26	31	19	37	27	35	35	25	24	23
35 LIKE TO BE	36	52	15	33	14	14	28	14	41	35	41	40	39	22	48
36 PLYS POKER	34	46	36	42	40	35	32	40	29	36	31	29	40	46	45
37 GOOD TASTE	36	29	23	36	24	31	33	21	35	27	30	30	34	43	36
38 OPTN ADVAN	31	45	19	32	19	20	25	17	36	31	34	28	43	21	46
39 PLYS CHESS	38	33	36	25	34	36	44	29	47	40	48	44	35	31	41
40 SUCCESSFUL	30	39	18	22	15	20	25	17	35	27	30	28	29	22	31
41 PLYS BRIDG	32	46	28	27	30	34	37	31	36	32	36	36	28	37	36
42 DEEP	38	19	38	20	20	32	37	23	42	33	44	43	25	18	21
43 ADAPTL HBT	43	34	38	30	26	33	35	28	35	29	35	31	31	32	22
44 STABLE	30	58	34	39	26	30	33	30	33	32	35	40	28	45	27
45 HOT	44	33	41	41	37	41	42	37	43	43	41	40	40	42	33
46 INTERESTNG	43	18	34	24	19	31	36	21	45	32	41	38	27	24	24
47 THOUGHTFUL	35	26	30	18	19	30	36	18	37	26	38	33	21	20	20
48 RATIONAL	30	53	34	36	27	26	32	33	34	30	34	40	29	32	34

[a] See Notes to Tables on page B-18

TABLE 73

AVERAGE PROFILE[a]

MIDWESTERN PUBLIC UNIV. BUSINESS ADMINISTRATION STUDENTS, FRESHMEN & SENIORS

SCALE	OCCUPATION 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
01 WEALTHY	29	50	20	38	17	26	27	21	38	34	35	29	49	36	52
02 INDIVIDIST	45	17	36	28	37	38	43	27	48	43	47	42	41	19	39
03 PRETY WIFE	36	40	29	40	32	38	35	32	39	35	38	34	38	42	41
04 RESPONSIBL	19	49	18	25	16	23	22	19	24	24	24	23	24	25	24
05 ACTIVE	33	42	19	27	20	32	24	19	32	27	29	22	32	31	25
06 UNSELFISH	32	43	40	31	24	35	38	34	36	33	39	39	26	32	20
07 CLEANCUT	26	54	20	35	22	31	27	22	28	24	27	23	29	44	30
08 CALM	30	50	35	37	20	32	37	32	35	32	37	40	35	37	30
09 INTRST ART	40	13	39	26	34	39	43	34	41	39	45	41	30	37	37
10 OPTIMISTIC	36	41	25	33	27	33	32	25	34	33	33	25	32	27	27
11 INTELLIGNT	21	32	19	16	14	18	24	15	27	25	29	24	23	14	27
12 SELF SUFNT	27	43	30	35	27	27	32	33	35	32	33	34	33	25	32
13 HAPPY HOME	33	44	35	33	33	33	36	33	36	33	35	35	34	37	31
14 HARD	40	45	31	40	40	36	29	30	38	38	37	34	43	38	46
15 HI SOC STA	29	48	19	28	16	27	28	18	38	33	36	30	39	29	45
16 NO EMOT PB	39	51	41	40	36	37	40	37	39	36	40	40	38	41	36
17 PERS SATIS	31	19	25	23	17	26	32	21	38	32	36	28	22	20	21
18 CAUTIOUS	23	52	33	34	23	29	33	30	31	30	32	36	31	31	32
19 POWFUL AFR	38	57	23	34	30	39	34	19	44	38	41	37	42	41	44
20 COLORFUL	43	27	27	32	29	39	36	23	41	34	37	29	36	37	37
21 SELF ASSTV	35	30	22	26	24	30	28	19	36	32	33	25	35	25	34
22 CHEERFUL	36	45	29	31	27	34	32	30	33	29	30	28	30	38	28
23 PERSEVERNG	23	31	21	24	20	23	25	19	31	29	28	25	28	17	25
24 ATENTV PPL	36	50	26	25	18	40	32	21	28	22	26	20	23	45	17
25 CONSERVTIV	28	54	36	40	29	36	34	39	30	32	34	38	32	43	33
26 REALST LIF	29	49	26	31	20	32	29	25	34	29	32	30	29	33	26
27 WISE	26	40	23	23	19	26	27	20	32	28	30	27	27	22	29
28 SOC POPLAR	31	42	21	29	21	32	29	23	32	28	31	26	31	37	32
29 SENSITIVE	37	27	39	34	32	38	40	35	36	36	37	37	31	34	29
30 STRONG	35	46	26	35	26	32	27	25	34	34	34	30	37	32	34
31 SOCIABLE	34	45	20	29	23	34	29	23	31	25	27	22	28	42	24
32 VALUABLE	23	37	20	19	15	20	24	19	29	29	28	25	21	18	26
33 CONFIDENT	25	38	20	25	16	23	25	19	30	26	30	24	27	22	28
34 PESLY EFFT	28	42	20	24	17	26	29	20	33	28	31	27	28	27	32
35 LIKE TO BE	32	55	19	39	38	38	29	29	38	33	42	34	45	46	52

[a] See Notes to Tables on page B-18

TABLE 74

AVERAGE PROFILE[a]

MIDWESTERN PUBLIC UNIV. MALE EDUCATION STUDENTS, FRESHMEN & SENIORS

SCALE	OCCUPATION														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
01 WEALTHY	32	50	19	36	16	22	26	18	36	33	33	32	47	32	51
02 INDIVIDIST	48	15	46	27	38	38	46	34	49	45	50	45	37	18	34
03 PRETY WIFE	38	42	29	39	30	34	33	28	37	35	36	34	37	41	41
04 RESPONSIBL	21	48	20	22	15	21	22	18	24	23	23	26	20	23	19
05 ACTIVE	35	35	21	26	19	25	24	22	31	29	29	27	25	25	22
06 UNSELFISH	38	41	46	29	26	38	43	34	40	36	42	43	24	30	17
07 CLEANCUT	28	52	23	39	24	28	29	24	27	26	27	26	27	44	27
08 CALM	29	49	38	37	20	32	36	33	40	31	38	42	34	36	24
09 INTRST ART	41	12	38	24	30	39	44	32	44	41	44	42	29	32	33
10 OPTIMISTIC	38	40	26	31	24	27	31	27	35	32	33	29	28	27	23
11 INTELLIGNT	23	30	22	14	14	16	26	16	29	27	30	30	20	13	24
12 SELF SUFNT	28	41	32	33	21	28	33	32	35	33	34	38	29	23	25
13 HAPPY HOME	35	44	38	31	32	33	36	31	36	34	36	37	28	37	29
14 HARD	41	45	30	37	37	31	29	29	33	35	33	33	42	36	46
15 HI SOC STA	34	47	19	25	15	24	27	18	37	31	34	34	36	27	44
16 NO EMOT PB	40	50	46	37	37	38	40	35	41	38	40	42	34	40	34
17 PERS SATIS	37	18	30	21	18	24	36	23	38	33	35	36	20	17	16
18 CAUTIOUS	26	51	36	34	24	32	35	30	33	33	32	37	32	29	27
19 POWFUL AFR	43	55	22	31	26	36	32	19	43	38	40	41	37	39	43
20 COLORFUL	45	23	34	29	31	34	38	26	43	38	41	39	33	33	34
21 SELF ASSTV	39	29	25	25	23	28	27	21	30	30	30	28	30	24	28
22 CHEERFUL	38	43	34	32	27	32	34	32	35	32	32	31	28	36	25
23 PERSEVERNG	24	31	24	22	18	22	24	20	28	28	28	26	23	17	20
24 ATENTV PPL	40	43	35	27	19	39	35	25	32	27	26	29	20	48	18
25 CONSERVTIV	27	55	31	40	29	36	35	39	33	34	31	37	34	47	36
26 REALST LIF	34	44	30	24	19	27	32	22	32	29	33	34	25	28	20
27 WISE	29	37	28	21	18	26	29	21	32	29	32	32	24	21	26
28 SOC POPLAR	33	40	24	27	19	31	29	23	34	30	31	31	28	37	33
29 SENSITIVE	36	23	42	29	31	38	41	36	39	35	38	39	27	36	24
30 STRONG	40	42	29	32	24	29	27	25	34	33	35	34	33	32	30
31 SOCIABLE	32	42	22	28	20	32	29	22	31	27	26	26	25	41	24
32 VALUABLE	27	33	26	16	14	20	27	19	31	28	31	32	17	15	21
33 CONFIDENT	28	36	23	22	17	22	25	18	29	24	28	27	24	20	25
34 PESLY EFFT	34	37	27	21	19	25	31	22	36	32	34	34	22	23	25
35 LIKE TO BE	52	45	35	22	34	38	42	31	47	43	48	50	23	37	39

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[a] See Notes to Tables on page B-18

TABLE 75

AVERAGE PROFILE[a]

MIDWESTERN PUBLIC UNIV.,MALES + FEMALES, FRESH. + SENIORS, S

SPECIAL OCCUPATION LIST A

SCALE	OCCUPATION														
	3	4	6	9	10	18	19	20	26	29	31	36	45	47	48
01 WEALTHY	19	39	25	39	35	51	29	20	51	42	44	42	17	25	47
02 INDIVIDIST	45	29	38	50	44	44	26	32	41	46	19	39	40	37	52
03 PRETY WIFE	28	40	35	38	35	39	41	30	42	37	38	39	30	35	44
04 RESPONSIBL	22	23	23	24	23	23	21	18	18	37	44	21	16	22	24
05 ACTIVE	23	30	29	32	27	30	32	20	27	27	37	35	22	29	47
06 UNSELFISH	46	33	39	39	36	27	33	35	19	45	42	34	25	31	37
07 CLEANCUT	23	40	28	29	24	29	41	23	25	29	48	34	22	28	37
08 CALM	43	40	37	40	32	36	33	37	26	45	49	32	22	28	31
09 INTRST ART	41	26	43	44	41	31	37	35	29	47	21	41	33	35	44
10 OPTIMISTIC	30	35	29	37	32	31	32	28	23	28	43	34	27	29	43
11 INTELLIGNT	23	15	19	31	28	23	13	16	22	37	21	23	15	21	33
12 SELF SUFNT	33	34	30	35	34	31	25	31	32	40	39	29	25	28	35
13 HAPPY HOME	37	34	33	37	35	30	36	33	24	42	43	35	32	35	38
14 HARD	30	39	34	36	36	42	36	30	49	34	39	41	39	40	47
15 HI SOC STA	21	29	25	38	35	39	26	19	35	45	38	40	17	27	47
16 NO EMOT PB	44	41	40	41	39	39	38	40	35	44	50	39	36	38	43
17 PERS SATIS	32	24	27	40	37	23	22	22	18	42	26	31	17	25	47
18 CAUTIOUS	34	36	31	32	30	30	29	31	23	44	48	26	23	28	25
19 POWFUL AFR	23	32	38	43	40	38	39	18	33	49	40	49	28	36	51
20 COLORFUL	34	31	37	45	38	37	37	26	36	34	21	44	30	36	52
21 SELF ASSTV	23	27	28	35	30	32	29	20	31	26	26	39	25	29	48
22 CHEERFUL	33	33	33	36	32	31	37	32	25	30	44	36	27	30	43
23 PERSEVERNG	22	23	23	29	29	25	17	17	21	23	27	23	19	24	31
24 ATENTV PPL	27	26	39	29	23	21	45	22	15	24	31	41	18	21	44
25 CONSERVTIV	33	41	38	33	32	32	41	37	27	41	50	33	31	33	26
26 REALST LIF	30	27	33	35	32	27	28	24	26	37	34	30	21	26	40
27 WISE	28	22	29	33	31	27	23	21	23	37	30	30	20	25	36
28 SOC POPLAR	24	29	31	35	30	30	38	23	27	37	34	39	21	29	42
29 SENSITIVE	38	30	38	36	33	29	36	32	24	40	22	35	28	30	34
30 STRONG	29	34	29	37	34	35	33	24	29	36	37	39	25	30	47
31 SOCIABLE	20	28	32	31	26	26	40	22	22	23	36	39	22	27	40
32 VALUABLE	25	17	20	31	29	19	17	19	20	35	26	24	15	23	34
33 CONFIDENT	22	23	23	31	28	27	23	20	22	25	33	28	18	24	38
34 PESLY EFFT	24	23	26	34	31	26	26	20	23	35	30	31	19	28	41
35 LIKE TO BE	23	31	27	39	37	39	33	29	49	43	37	38	25	42	51

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[a] See Notes to Tables on page B-18

TABLE 76

AVERAGE PROFILE[a]

SCHOOL OF OSTEOPATHY STUDENTS, FRESHMEN & SENIORS
SPECIAL OCCUPATION LIST B

SCALE	OCCUPATION														
	1	2	3	6	8	10	12	13	14	15	16	17	43	45	46
01 WEALTHY	36	49	21	28	23	38	36	49	36	50	42	36	23	20	22
02 INDIVIDIST	47	16	38	34	33	48	46	44	19	41	34	29	40	35	24
03 PRETY WIFE	36	36	28	33	30	35	33	38	41	41	39	39	31	30	31
04 RESPONSIBL	22	49	21	23	20	24	28	23	19	24	24	20	21	19	17
05 ACTIVE	37	36	21	25	22	29	26	29	26	27	31	28	28	22	19
06 UNSELFISH	39	46	49	37	40	37	44	28	34	23	31	31	35	34	27
07 CLEANCUT	30	52	25	30	26	26	28	29	42	30	33	34	24	24	25
08 CALM	33	51	45	35	37	34	44	36	36	30	37	32	29	27	28
09 INTRST ART	41	14	38	37	33	40	44	29	34	34	27	27	32	33	32
10 OPTIMISTIC	39	42	31	30	30	34	31	31	29	30	35	33	30	30	25
11 INTELLIGNT	26	28	23	21	19	28	30	24	14	28	19	16	21	18	18
12 SELF SUFNT	30	47	35	28	32	36	36	35	26	32	35	32	27	27	23
13 HAPPY HOME	34	44	40	33	35	36	38	32	37	33	34	34	32	36	32
14 HARD	40	45	28	33	28	36	32	43	37	46	39	35	39	36	37
15 HI SOC STA	36	44	22	28	22	34	34	38	27	41	32	25	22	16	22
16 NO EMOT PB	39	52	46	39	38	41	44	40	42	39	41	40	37	40	37
17 PERS SATIS	37	20	32	26	25	36	36	25	18	24	24	22	25	19	16
18 CAUTIOUS	26	52	36	32	31	31	38	31	30	32	33	33	29	29	27
19 POWFUL AFR	41	56	24	39	18	40	41	40	42	40	40	35	35	26	31
20 COLORFUL	45	24	31	37	27	38	34	36	38	38	35	33	34	30	27
21 SELF ASSTV	39	28	23	29	21	32	28	33	27	33	31	27	29	23	22
22 CHEERFUL	38	44	35	33	31	32	31	31	37	30	34	33	29	29	25
23 PERSEVERNG	28	30	24	24	20	31	26	27	17	25	26	23	25	21	19
24 ATENTV PPL	38	47	35	41	28	26	27	25	48	20	28	29	25	22	17
25 CONSERVTIV	28	55	40	38	39	32	41	31	43	33	37	37	31	31	34
26 REALST LIF	34	46	33	31	28	32	35	30	31	26	33	29	26	23	21
27 WISE	30	41	27	28	23	31	32	28	24	30	28	23	26	22	21
28 SOC POPLAR	35	39	25	30	23	31	31	30	35	32	30	29	23	20	22
29 SENSITIVE	36	22	40	37	39	37	40	29	31	29	30	30	32	32	30
30 STRONG	39	45	28	28	26	34	32	36	30	33	35	31	30	26	24
31 SOCIABLE	34	40	23	31	23	26	26	28	39	26	30	29	24	23	20
32 VALUABLE	27	33	26	22	21	29	31	20	17	24	22	19	20	17	16
33 CONFIDENT	28	40	24	24	20	29	27	28	23	29	28	23	22	20	18
34 PESLY EFFT	33	38	27	28	23	32	32	28	25	30	26	23	22	19	17
35 LIKE TO BE	57	49	40	39	38	48	53	45	31	49	39	36	38	24	11

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[a] See Notes to Tables on page B-18

TABLE 77

AVERAGE PROFILE[a]

EASTERN PRIVATE COLLEGE FACULTY

SCALE	OCCUPATION														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
01 WEALTHY	37	59	17	53	22	29	23	23	44	34	39	31	62	39	60
02 INDIVIDIST	55	17	53	28	49	48	52	45	57	51	57	55	43	26	33
03 PRETY WIFE	40	34	31	40	33	37	33	34	39	33	39	34	43	42	45
04 RESPONSIBL	26	41	29	26	21	27	24	26	26	28	29	33	25	29	23
05 ACTIVE	45	26	23	31	24	28	25	23	39	35	38	29	36	30	27
06 UNSELFISH	42	48	53	31	34	42	47	48	44	40	48	50	26	31	19
07 CLEANCUT	32	50	27	40	28	31	30	31	30	25	32	26	34	41	39
08 CALM	30	53	36	39	24	32	34	33	34	31	36	40	36	36	31
09 INTRST ART	48	11	44	25	35	47	48	39	50	42	52	50	34	32	36
10 OPTIMISTIC	39	40	29	36	32	32	32	33	37	31	36	27	36	32	32
11 INTELLIGNT	32	28	26	17	24	24	29	22	35	30	38	36	29	18	28
12 SELF SUFNT	30	33	37	33	29	31	34	34	38	38	38	41	35	24	33
13 HAPPY HOME	37	47	42	32	37	35	39	39	39	36	38	41	34	37	34
14 HARD	37	46	27	45	34	32	26	26	36	34	34	29	45	34	46
15 HI SOC STA	41	45	19	34	18	29	27	22	44	35	44	36	50	31	51
16 NO EMOT PB	41	51	44	43	36	38	43	42	42	40	40	43	46	44	43
17 PERS SATIS	41	17	29	19	22	29	31	28	44	34	44	40	26	17	22
18 CAUTIOUS	22	55	31	35	26	32	32	30	27	29	27	38	29	32	34
19 POWFUL AFR	47	62	23	40	36	40	30	20	49	42	48	45	52	42	52
20 COLORFUL	52	22	36	30	36	39	38	34	52	40	52	41	42	34	39
21 SELF ASSTV	45	31	23	34	28	34	26	23	35	30	36	25	41	32	39
22 CHEERFUL	38	41	32	39	29	35	34	33	38	30	35	29	37	36	38
23 PERSEVERNG	29	24	22	26	24	26	26	24	33	30	30	27	31	17	27
24 ATENTV PPL	43	44	31	27	24	42	35	26	31	23	29	26	23	48	18
25 CONSERVTIV	26	56	21	46	23	29	24	30	24	27	22	24	34	48	45
26 REALST LIF	37	43	32	39	27	33	33	27	36	34	36	37	35	35	26
27 WISE	38	41	35	27	29	37	35	33	40	39	40	42	34	28	32
28 SOC POPLAR	39	35	25	35	24	32	30	26	38	29	33	29	39	37	39
29 SENSITIVE	48	15	48	21	33	46	50	41	48	40	52	50	31	33	24
30 STRONG	40	42	27	40	25	31	25	28	39	36	39	32	41	35	34
31 SOCIABLE	40	41	24	36	28	35	29	24	33	25	29	21	34	43	30
32 VALUABLE	33	20	31	19	19	25	30	28	37	33	36	39	22	17	21
33 CONFIDENT	36	40	22	37	23	30	25	23	35	28	32	24	42	31	37
34 PESLY EFFT	39	33	27	26	22	30	28	25	39	31	39	35	33	29	31
35 LIKE TO BE	63	27	49	15	38	46	56	41	64	55	65	63	42	24	49
36 PLYS POKER	34	42	29	44	36	31	31	32	34	33	31	26	44	41	49
37 GOOD TASTE	45	23	42	27	36	45	45	36	48	41	47	48	35	37	38
38 OPTN ADVAN	38	52	21	41	23	24	21	23	40	31	40	27	54	24	56
39 PLYS CHESS	44	32	46	29	39	37	48	41	51	46	52	52	37	29	39
40 SUCCESSFUL	34	37	21	29	21	25	25	26	36	31	37	32	39	25	37
41 PLYS BRIDG	32	44	26	32	30	31	30	27	31	28	35	29	35	34	42
42 DEEP	44	28	44	24	35	42	41	36	49	43	51	49	36	24	32
43 ADAPTL HBT	47	34	37	34	34	38	36	31	47	34	42	36	41	34	29
44 STABLE	24	57	34	36	24	29	30	34	28	29	29	36	31	32	28
45 HOT	47	27	43	36	42	42	44	45	46	44	45	40	40	41	37
46 INTERESTNG	52	20	40	24	33	38	40	36	54	42	55	48	35	26	32
47 THOUGHTFUL	38	29	38	16	29	33	41	29	45	40	47	48	29	20	29
48 RATIONAL	25	58	38	29	31	24	32	30	35	36	35	40	36	25	44

[a] See Notes to Tables on page B-18

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AVERAGE PROFILE[a]

HIGH SCHOOL MALES, COLLEGE BOUND, FOUR PUBLIC SCHOOLS

SCALE	OCCUPATION														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
01 WEALTHY	37	45	20	36	17	24	28	19	36	34	36	35	45	29	49
02 INDIVIDIST	46	21	45	33	40	37	44	35	45	42	44	46	42	26	43
03 PRETY WIFE	39	36	30	39	30	32	36	31	36	36	39	35	40	39	41
04 RESPONSIBL	19	45	18	19	13	18	20	15	21	22	23	21	19	18	22
05 ACTIVE	34	37	23	27	19	22	26	18	27	26	30	27	24	25	21
06 UNSELFISH	33	42	38	26	21	29	36	28	35	32	36	37	25	27	21
07 CLEANCUT	27	50	20	31	19	24	28	19	25	25	28	23	25	38	25
08 CALM	30	45	39	31	20	33	38	32	38	34	41	36	36	36	27
09 INTRST ART	41	12	39	27	32	36	43	36	43	38	43	42	31	35	36
10 OPTIMISTIC	38	37	32	33	28	31	34	30	36	34	35	35	33	29	30
11 INTELLIGNT	22	31	19	13	13	17	25	14	25	25	30	26	17	12	25
12 SELF SUFNT	31	38	33	31	24	26	33	29	36	33	33	35	34	28	29
13 HAPPY HOME	34	42	35	32	29	29	35	30	35	33	35	34	30	35	30
14 HARD	42	42	35	33	36	28	30	27	34	38	36	34	36	34	42
15 HI SOC STA	36	44	21	28	17	27	33	19	35	33	38	34	35	27	38
16 NO EMOT PB	41	46	42	38	35	36	40	36	41	39	39	39	38	40	36
17 PERS SATIS	38	22	31	22	18	24	35	22	38	33	38	34	24	20	24
18 CAUTIOUS	28	43	32	32	22	27	33	31	36	31	33	35	32	29	29
19 POWFUL AFR	44	54	28	33	30	38	38	18	43	39	44	44	40	36	40
20 COLORFUL	44	25	31	34	27	30	37	25	40	35	39	37	34	33	37
21 SELF ASSTV	38	32	30	29	26	28	31	25	34	32	34	31	31	28	32
22 CHEERFUL	38	43	35	32	26	29	35	29	38	32	34	30	30	37	27
23 PERSEVERNG	30	30	25	24	19	22	27	20	31	29	30	28	25	19	24
24 ATENTV PPL	36	45	30	29	20	33	37	21	34	26	29	29	25	40	20
25 CONSERVTIV	31	49	34	36	31	37	35	39	35	32	34	36	33	42	33
26 REALST LIF	32	39	30	26	19	27	31	25	33	28	32	32	25	27	25
27 WISE	27	37	24	18	15	21	27	17	29	27	31	29	22	17	25
28 SOC POPLAR	35	40	23	29	19	27	32	21	33	29	34	31	29	32	31
29 SENSITIVE	34	26	36	34	32	36	39	37	38	36	37	37	33	33	32
30 STRONG	41	43	32	34	24	23	28	24	34	33	36	32	34	32	31
31 SOCIABLE	32	38	22	27	19	26	30	19	29	25	29	25	25	34	23
32 VALUABLE	26	34	23	16	13	18	27	17	29	27	30	29	17	14	24
33 CONFIDENT	30	35	23	21	15	19	27	17	29	26	30	26	22	21	27
34 PESLY EFFT	33	39	28	23	18	25	33	21	34	32	36	33	24	23	29
35 LIKE TO BE	49	51	29	42	33	28	40	29	45	44	47	46	42	32	51

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[a] See Notes to Tables on page B-18

TABLE 80

AVERAGE PROFILE[a]

HIGH SCHOOL FEMALES, COLLEGE BOUND, FOUR PUBLIC SCHOOLS

SCALE	OCCUPATION														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
01 WEALTHY	37	48	20	36	17	26	31	18	38	38	39	38	45	32	48
02 INDIVIDIST	49	15	40	28	34	35	43	30	45	42	43	45	35	19	33
03 PRETY WIFE	39	35	30	39	31	36	38	30	38	37	41	35	40	41	39
04 RESPONSIBL	18	49	20	16	12	19	21	15	20	20	24	20	18	18	17
05 ACTIVE	36	39	21	27	17	24	24	16	28	26	29	25	24	25	18
06 UNSELFISH	32	41	40	28	19	32	35	29	35	30	36	37	25	27	17
07 CLEANCUT	26	55	22	34	17	26	31	18	24	25	31	23	26	44	21
08 CALM	28	46	42	32	18	36	39	36	37	32	41	35	34	40	22
09 INTRST ART	43	12	37	26	33	36	45	35	43	39	44	46	29	36	34
10 OPTIMISTIC	37	40	32	34	25	31	36	26	36	34	36	34	31	29	25
11 INTELLIGNT	22	29	19	13	12	18	26	12	25	24	32	26	16	12	21
12 SELF SUFNT	29	39	32	28	20	26	32	28	33	32	34	32	31	22	23
13 HAPPY HOME	33	41	36	29	27	30	34	32	34	33	33	33	29	34	26
14 HARD	41	41	32	29	36	31	28	26	33	39	36	35	35	31	44
15 HI SOC STA	37	47	18	29	16	28	33	18	36	34	39	35	35	29	38
16 NO EMOT PB	39	49	44	36	32	37	38	36	39	38	39	39	37	40	32
17 PERS SATIS	40	26	31	23	18	27	36	22	38	33	35	38	23	19	20
18 CAUTIOUS	25	49	36	31	19	29	34	28	34	31	33	32	30	26	25
19 POWFUL AFR	45	55	26	33	28	38	39	20	43	40	45	43	38	38	36
20 COLORFUL	45	20	31	33	26	32	41	26	41	37	42	36	33	33	30
21 SELF ASSTV	39	30	28	27	24	30	31	22	33	31	35	30	29	25	26
22 CHEERFUL	37	44	33	32	23	32	36	32	35	31	34	30	29	40	23
23 PERSEVERNG	28	32	23	20	17	23	27	18	29	28	31	26	23	17	20
24 ATENTV PPL	36	47	29	26	15	32	34	20	30	24	28	26	21	42	15
25 CONSERVTIV	28	51	35	34	30	37	37	38	34	32	33	37	32	40	32
26 REALST LIF	31	42	30	22	16	26	29	20	31	28	32	30	22	24	19
27 WISE	27	38	25	17	14	22	29	16	30	26	31	29	21	17	22
28 SOC POPLAR	35	41	22	30	17	28	31	21	32	30	34	29	29	34	27
29 SENSITIVE	33	21	40	36	34	33	39	38	37	36	37	39	33	30	31
30 STRONG	40	41	29	30	20	25	27	20	32	32	35	33	30	28	25
31 SOCIABLE	32	42	20	27	17	26	29	18	28	24	27	24	24	38	18
32 VALUABLE	27	30	25	15	12	19	26	16	30	27	32	30	16	13	18
33 CONFIDENT	30	36	22	20	15	23	27	17	28	26	29	25	22	23	20
34 PESLY EFFT	34	37	28	22	15	24	33	20	35	31	36	33	23	23	22
35 LIKE TO BE	53	40	36	41	33	49	58	34	47	41	54	50	31	41	29

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[a] See Notes to Tables on page B-18

TABLE 81

AVERAGE PROFILE[a]

HIGH SCHOOL FEMALES, NOT COLLEGE BOUND, FOUR HIGH SCHOOLS

SCALE	OCCUPATION														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
01 WEALTHY	36	40	23	32	23	29	30	18	36	35	37	37	44	28	47
02 INDIVIDIST	40	22	37	38	38	39	39	34	41	37	40	42	37	30	40
03 PRETY WIFE	38	37	32	36	32	36	37	29	37	37	39	37	39	39	38
04 RESPONSIBL	19	42	19	16	13	18	19	15	19	20	21	19	18	17	21
05 ACTIVE	29	36	22	24	18	21	24	18	24	22	25	24	24	22	19
06 UNSELFISH	29	37	35	24	17	26	32	26	29	29	36	31	27	26	19
07 CLEANCUT	25	51	22	31	18	27	27	20	24	25	25	24	27	41	24
08 CALM	31	42	36	31	17	30	34	35	35	32	36	35	33	31	27
09 INTRST ART	42	12	39	31	37	37	40	41	42	39	41	43	32	38	41
10 OPTIMISTIC	38	41	37	35	30	35	34	32	36	35	37	37	36	35	32
11 INTELLIGNT	20	28	18	13	12	17	20	13	21	21	25	24	16	13	23
12 SELF SUFNT	28	38	35	32	25	30	34	33	34	31	32	36	36	27	29
13 HAPPY HOME	31	39	33	29	26	29	32	30	32	31	33	31	30	34	29
14 HARD	41	43	34	30	42	34	31	28	37	41	38	37	35	33	45
15 HI SOC STA	33	43	22	24	19	29	29	18	30	28	33	33	30	26	33
16 NO EMOT PB	38	46	41	37	33	38	42	35	38	39	41	39	38	38	36
17 PERS SATIS	35	25	31	26	21	27	31	22	34	30	33	34	28	25	25
18 CAUTIOUS	26	41	32	32	19	27	30	28	33	28	30	34	30	25	30
19 POWFUL AFR	41	50	27	31	32	38	35	20	39	37	40	43	36	32	36
20 COLORFUL	38	21	32	35	27	31	35	27	35	31	35	34	33	34	31
21 SELF ASSTV	35	35	34	33	30	31	33	32	34	35	35	34	35	33	32
22 CHEERFUL	34	42	32	33	22	28	33	32	31	28	30	28	30	37	26
23 PERSEVERNG	28	30	25	25	20	25	27	23	29	26	29	28	27	22	27
24 ATENTV PPL	31	45	32	26	18	30	31	20	27	28	28	26	26	39	21
25 CONSERVTIV	33	41	35	33	29	33	35	32	36	34	33	34	32	36	31
26 REALST LIF	31	36	30	25	19	26	28	23	30	27	31	29	24	26	23
27 WISE	23	36	23	16	13	20	24	16	28	24	28	29	20	17	23
28 SOC POPLAR	30	36	23	26	19	29	28	19	28	27	30	29	28	33	27
29 SENSITIVE	32	27	36	33	34	36	38	36	36	36	35	38	34	31	34
30 STRONG	34	42	29	29	18	21	26	20	31	31	31	30	29	27	27
31 SOCIABLE	27	36	21	23	17	24	25	18	26	23	24	25	23	30	20
32 VALUABLE	26	34	24	16	13	20	24	16	27	25	27	29	19	14	22
33 CONFIDENT	27	35	25	19	16	22	24	17	27	25	27	28	21	22	25
34 PESLY EFFT	34	38	30	26	19	27	32	22	33	31	35	32	26	25	30
35 LIKE TO BE	45	50	34	52	43	54	55	41	34	35	46	42	45	53	30

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[a] See Notes to Tables on page B-18

TABLE 82

AVERAGE PROFILE[a]

WOMEN IN OCCUPATIONS, SENIOR RESPONSES, MALE & FEMALE, FOUR SCHOOLS POOLED

SCALE	OCCUPATION 2	4	6	9	11	14	16	17	19	21	28	31	32	33	34
02 INDIVIDIST	24	20	31	33	44	45	29	38	45	43	34	45	27	38	49
04 RESPONSIBL	46	44	21	16	22	25	27	21	22	18	24	21	20	21	28
06 UNSELFISH	52	46	35	26	38	32	41	34	31	23	42	27	36	23	32
08 CALM	58	51	32	21	32	33	46	26	26	21	37	33	28	28	38
11 INTELLIGNT	39	31	15	13	26	31	24	21	28	23	26	26	14	26	34
12 SELF SUFNT	62	43	33	26	36	34	40	30	29	29	38	34	27	30	42
16 NO EMOT PB	53	51	41	35	39	39	41	38	43	37	40	39	41	38	41
17 PERS SATIS	25	23	22	17	32	30	25	30	34	20	30	22	21	20	29
18 CAUTIOUS	53	49	31	24	34	29	42	26	26	26	35	28	28	27	33
21 SELF ASSTV	27	30	27	23	33	36	23	36	45	32	25	31	31	30	41
22 CHEERFUL	37	42	32	25	24	27	28	31	34	20	27	24	37	24	26
25 CONSERVTIV	54	52	33	29	32	28	45	30	22	28	37	28	36	30	31
26 REALST LIF	49	44	29	23	31	31	28	31	36	24	30	29	30	23	34
27 WISE	45	40	24	22	30	32	31	29	31	26	29	27	26	27	34
29 SENSITIVE	25	22	33	29	37	32	35	35	32	30	38	29	34	27	30
31 SOCIABLE	20	38	33	30	22	27	23	36	46	25	22	25	46	24	26
33 CONFIDENT	34	39	24	17	26	30	25	27	35	21	23	29	25	27	35
49 EXTR-CURIC	23	40	39	43	31	32	26	42	48	34	33	29	52	30	29
50 NAIVE	52	50	51	52	53	42	57	44	38	49	53	45	43	51	42
51 ATRACT MEN	20	33	42	41	24	33	32	37	48	27	29	32	47	35	27
52 UPER CLASS	41	38	33	29	39	41	36	39	44	43	35	40	36	40	42
53 HI OC GOAL	27	36	21	14	31	37	26	28	40	28	26	32	18	32	45
54 WELL-ROUND	38	42	32	29	27	33	27	38	43	28	28	27	45	28	32
55 POISED	27	40	28	24	22	30	26	33	38	25	22	26	35	27	34
56 WELL-TO-DO	36	44	39	23	34	41	37	38	49	41	31	42	33	44	41
57 REFINED	35	40	26	24	25	29	34	31	27	28	26	25	33	28	30
58 OPEN-MIND	41	38	31	24	31	34	27	33	38	27	31	27	32	25	35
59 UPWD MOBLE	28	39	32	25	30	35	30	35	44	34	27	35	32	36	37
60 UNDRSTNDNG	48	44	30	21	34	29	34	37	33	20	37	21	43	18	29
61 INTST WRLD	49	44	21	31	36	41	17	39	27	39	33	25	34	27	44
62 DATE A LOT	20	38	44	45	26	35	32	41	50	30	31	32	51	38	27
63 EXTRAVERT	21	41	39	36	28	35	26	43	51	31	26	31	51	30	33
64 SOC CLIMBR	28	43	53	60	41	50	49	48	51	61	40	58	47	62	47
65 ACAD SESFL	42	38	17	16	32	32	27	24	30	26	31	26	17	28	40
66 LIKE TO MA	58	38	38	42	31	25	38	32	34	26	35	17	45	30	29

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[a] See Notes to Tables on page B-18

TABLE 83

AVERAGE PROFILE[a]

WOMEN IN OCCUPATIONS, FRESHMAN RESPONSES, MALE & FEMALE, FOUR SCHOOLS POOLED

SCALE	OCCUPATION														
	2	4	6	9	11	14	16	17	19	21	28	31	32	33	34
02 INDIVIDIST	29	19	31	31	45	43	26	36	43	42	35	40	25	35	48
04 RESPONSIBL	43	43	20	15	22	26	25	19	21	17	23	20	18	19	25
06 UNSELFISH	51	43	30	23	36	32	38	32	32	20	39	24	32	19	31
08 CALM	56	48	28	18	33	32	44	27	29	20	34	30	30	25	37
11 INTELLIGNT	38	31	14	12	26	31	21	19	30	24	26	22	13	25	34
12 SELF SUFNT	62	43	31	25	38	36	37	29	29	28	37	31	26	27	41
16 NO EMOT PB	53	52	41	36	39	39	41	39	44	36	40	39	42	37	43
17 PERS SATIS	25	24	21	17	33	30	26	28	35	18	31	22	20	19	28
18 CAUTIOUS	49	48	29	21	30	28	37	23	25	22	29	25	24	25	30
21 SELF ASSTV	27	32	27	23	35	35	23	33	44	31	26	30	26	28	39
22 CHEERFUL	33	42	30	22	23	25	28	30	34	18	26	23	35	20	24
25 CONSERVTIV	50	51	34	30	32	29	44	31	24	27	38	29	35	30	31
26 REALST LIF	45	41	26	20	31	31	25	28	35	22	28	26	26	21	34
27 WISE	42	39	22	20	30	31	27	26	29	24	28	24	22	24	33
29 SENSITIVE	23	20	31	30	35	33	35	35	30	31	37	30	32	27	28
31 SOCIABLE	18	38	34	27	21	26	23	36	43	23	24	25	43	21	24
33 CONFIDENT	31	37	24	16	26	30	24	24	34	21	24	25	22	24	32
49 EXTR-CURIC	21	38	37	38	28	32	25	40	44	30	32	27	49	27	27
50 NAIVE	51	48	54	55	50	44	57	45	41	48	53	48	48	52	44
51 ATRACT MEN	17	32	40	35	22	30	30	37	47	27	29	31	44	35	27
52 UPER CLASS	39	39	34	28	41	42	36	38	45	43	37	41	35	43	42
53 HI OC GOAL	28	35	19	14	32	38	24	25	43	27	28	30	17	31	48
54 WELL-ROUND	36	42	31	25	28	30	26	36	41	25	27	24	42	24	28
55 POISED	26	41	27	21	24	30	25	31	37	23	24	25	32	23	33
56 WELL-TO-DO	31	43	38	22	34	40	35	36	48	41	32	42	33	44	41
57 REFINED	32	38	25	22	25	27	30	30	27	26	28	24	31	26	30
58 OPEN-MIND	41	39	28	23	33	34	26	30	34	25	32	27	27	23	34
59 UPWD MOBLE	27	41	32	24	32	36	29	33	43	34	29	34	31	36	39
60 UNDRSTNDNG	47	44	29	18	33	30	32	36	32	18	36	21	41	16	25
61 INTST WRLD	50	45	19	28	37	40	16	35	25	37	35	24	30	26	42
62 DATE A LOT	19	38	43	41	27	32	32	40	49	31	31	34	49	37	27
63 EXTRAVERT	24	42	38	34	31	35	27	41	50	30	30	32	49	29	32
64 SOC CLIMBR	26	42	55	62	41	49	51	48	52	63	42	60	49	65	49
65 ACAD SESFL	43	39	17	14	33	34	26	23	32	25	32	24	16	28	41
66 LIKE TO MA	55	35	38	41	29	25	34	34	34	25	36	20	47	29	27

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[a] See Notes to Tables on page B-18

NOTE TO TABLES 84 THROUGH 86

The following three tables contain additional background information about the midwestern reference liberal arts undergraduate students who constituted a significant group in the basic reference set of data. The corresponding information on the eastern college students is contained in O'Dowd and Beardslee (1960).

Table 84

TYPES OF COMMUNITIES IN WHICH NEWLY TESTED REFERENCE GROUP LIBERAL ARTS STUDENTS SPENT MOST OF THEIR CHILDHOOD

	Midwestern			
	Private College		Public University	
Community Type and Population Size	Men (N = 215) %	Women (N = 211) %	Men (N = 232) %	Women (N = 160) %
A. Rural Area or Small Town (under 10,000)	25	13	24	28
B. Small City (10,000 - 100,000)	22	30	31	29
C. Large City (over 100,000)	23	21	25	27
D. Suburb	29	37	21	16

Table 85

ACADEMIC MAJOR OR INTENDED MAJOR OF NEWLY TESTED REFERENCE GROUP LIBERAL ARTS STUDENTS

	Midwestern			
	Private College		Public University	
Major Field	Men (N = 215) %	Women (N = 211) %	Men (N = 232) %	Women (N = 160) %
A. Natural Science	22	7	20	2
B. Biology (incl. Pre-Med.)	4	4	12	10
C. Psychology and Sociology	7	17	8	6
D. Mathematics	8	5	8	3
E. Social Sciences	24	12	28	12
F. Humanities (Hist., Phil., Relig.)	14	7	6	9
G. English and Literature	5	15	1	6
H. Languages	6	11	2	8
I. Arts	3	9	2	10
J. Education	1	8	3	16
K. Applied Fields	3	1	3	7
L. Undecided or Uncodeable	4	3	7	12

Table 86

OCCUPATIONAL INTENTIONS OF NEWLY TESTED REFERENCE GROUP LIBERAL ARTS MEN

Occupational Intention	Midwestern Private College (N = 215) %	Midwestern Public University (N = 232) %
A. Business Executive	5	3
B. Business (unspecified)	1	5
C. Sales Mgr., Salesman, Insurance Sales; Brokerage, Banking	1	--
D. Indus. Mgr., Off. Supvr., Personnel, Ret. Store Mgr.	--	3
E. Independent Entrepreneur	--	--
F. College Professor	14	5
G. School Teacher	1	6
H. Teacher (unspecified)	15	9
I. Scientist	15	7
J. Minister, Foreign Serv., Public Administration	7	9
K. Doctor	9	12
L. Engineer	--	2
M. Lawyer	11	9
N. Writer, Architect; Professional (unspecified)	12	23
O. Other, or no Answer	9	7